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ABSTRACT

The Computer-Assisted Instruction (CAI) Project is an alternative, supplementary approach to providing reading, mathematics, and language arts instruction in schools in six northeastern Massachusetts communities. The CAI activities are provided as a supplement to instruction in Title I/Chapter I programs. Beginning in 1979, a 3-year research study was carried out to investigate whether computer learning could improve relevant test scores on standardized achievement tests, specifically the Metropolitan Achievement Test. A quasi experimental research design was utilized, with an experimental group (those receiving CAI in addition to regular instruction) and a comparison group (those receiving only regular instruction). Results showed CAI drill and practice to be effective when used to supplement classroom instruction. Particularly positive were the mathematics achievement gains of CAI students in all grades, as compared to students in the comparison group. Significant gains were also recorded for reading instruction. This report provides the results of the program's longitudinal evaluation, including extensive statistical data on student performance. (GC)

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LONGITUDINAL

EVALUATION OF THE

C /A /I

COMPUTER ASSISTED INSTRUCTION

TITLE 1 PROJECT

1979–82

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COMPUTER ASSISTED INSTRUCTION

EXECUTIVE SUMMARY

April, 1983

MAJOR PROGRAM ELEMENTS

The Computer-Assisted Instruction (CAI) Project, from the Merrimack Education Center, is an alternative, supplementary approach to providing reading, mathematics and language arts instruction in local schools. The service delivery, carried out through an educational service center, has proven CAI to be effective when compared to traditional classroom instruction and, especially, when used to supplement instruction by the teacher in the Chapter I classes. The Merrimack CAI Project was validated by the Joint Dissemination Review Panel, Spring, 1982. Other national studies have consistently shown that increased achievement results from the use of CAI as a supplement to traditional instruction.[1]

The CAI activities are integrated into the Chapter I program in a supplementary fashion, and the instructional activities, planned in conjunction with CAI lessons, enhance the individualized student programs. Instructional objectives of selected computer courseware in reading, mathematics and language arts, are matched with objectives of the locally existing curriculum. The teacher's planned lessons introduce, review or extend material which is then presented on the CAI computer terminal each day for review and extended practice. Therefore, the CAI lessons are supplementary to the teacher's classroom instruction for individual or small group tutorial instruction.

Daily CAI drill and practice, for ten minutes of each lesson, helps to improve a particular skill, whereas the tutorial component of CAI demonstrates to the student the instructional skill with descriptive material. From there, the CAI program is able to branch into further examples of the same skill or, if the pupil has responded appropriately, progress to a higher level skill with further examples and practice exercises.

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[1] Judith Edwards, et al. "Is CAI Effective?" AEDS Journal, Summer, 1974, pp. 122-126.

This potential of CAI as a technology, complete with tutorial and branching capabilities, extends beyond the capabilities of other instructional media because it is inherently interactive and can provide appropriate amounts and kinds of reinforcement at specific levels of difficulty. Using a terminal, CAI presents a dialogue where the student can respond to the program, ranging from simple exchange in structured formats to natural language conversations. No other existing teaching tool provides the richness of information, response analysis, hands-on practice and individualized treatment as in the current CAI programs.[2]

As part of the service delivery, the CAI program combines commercially-available courseware with supportive organizational arrangements including staff development, materials and manuals, hardware and software maintenance, management systems and technical assistance to all participating schools. The courseware used by the project has been implemented in other school district settings with similar consistently positive findings.[3, 4] Replicability of the drill and practice and tutorial components can therefore be guaranteed because the curriculum is standardized and packaged in strands. A brief description of the composition of the curriculum courseware is provided in Appendix A.

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[2] In 1971, J. Vinsonhaler reviewed ten major studies of the evaluation of CAI Drill and Practice and reported a substantial advantage for CAI augmentation of classroom instruction stating that "generally CAI groups show performance gains of one to eight months over groups receiving traditional instruction".

[3] Marjorie Rogosta, et al., CAI and Compensatory Education: The Los Angeles Unified School District Study, Educational Testing Service, Princeton, New Jersey, 1982.

[4] J. Fletcher and D. Jamison report higher average gain for CAI students on the California Test of Basic Skills and the California Arithmetic Test. Stanford University, California, 1973. "CAI and Educational Achievement".

Monitoring Student Progress

Diagnostic-prescriptive teaching has been hailed as the most desirable approach to use in Chapter I programs that emphasize comprehensive assessment of each student and specific instructional plans or prescriptions are then based on student-measured strengths and weaknesses. By such means, CAI allows the student to progress more rapidly and skill areas in need of additional attention are identified and better able to be remediated. These examples of diagnostic teaching in both reading and math are commonplace in the CAI schools.

The reinforcing capabilities of CAI, combined with teacher observation and performance testing, present the student small "bites" that are very carefully organized in the curriculum strands. Furthermore, CAI assists in compiling information about each student's performance as the student progresses through the curriculum. The recordkeeping function of CAI, which is not feasible for individual teachers to maintain manually, makes possible an additional means by which diagnostic-prescriptive teaching can progress.

Throughout the school year, students can easily be followed in mathematics and reading comprehension (both literal comprehension and interpretive comprehension) as well as word study skills. For example, in grade six reading, the vocabulary (word study) strand introduces 350 appropriate new vocabulary words at each grade level. This strand also contains practice in recognizing synonyms and antonyms. The vocabulary strand represents nearly 30% of the entire curriculum in Reading for Comprehension and its size reflects the importance of developing an adequate reading vocabulary. Word attack represents only 15% of the CAI curriculum at grade six, and comprehension (literal and inferential) represent another 30%. A typical student who enters the sixth grade with a vocabulary of 4.0 grade level could conceivably finish the year reading words at level 5.6 by the end of April. Individual student gain reports are recorded on the computer and reviewed by the teacher to examine student progress in two ways: (a) the percent of students mastering a particular objective; and, (b) the average number of skills mastered by a pupil at each grade level.

The information compiled by the computer on each student serves not only to guide a particular lesson, but also allows reports to be generated for teachers concerning areas of growing strength or continued weakness enabling professional judgements to be made about changing a prescription in progress. Teachers can then alter the curriculum strand or provide special drill and practice in the daily small group/tutorial sessions. Reports from the CAI include gains, grouping and course reports; any student's progress for the prior month or the entire year can be printed for the teacher to analyze. Gains and current status for each student in each of the several curriculum strands can be provided from the computer.

Research Question

Beginning in school year 1979-1980, a three-year research project was carried out to determine effectiveness of CAI. The research was planned to answer whether computer learning could improve relevant test scores measured on standardized achievement tests. A quasi-experimental research design was utilized, with a comparison group. Student achievement gains on the Metropolitan Achievement Test (Metro '78) Fall and Spring, were analyzed to determine whether student achievement was improved by using CAI as a supplement to regular Chapter I programs as compared with those gains observed for Chapter I students who had not been exposed to CAI.

Evaluations conducted separately in each program year (1979 through 1982) showed the supplementary CAI treatment to have been more effective than were regular services alone.

Summary of Findings

This evaluation study has shown CAI drill and practice to be effective when it is used to supplement classroom instruction in the Chapter I (Title I) program. During the 1979-1980 school year, it was found that the CAI treatment was superior to the non-CAI treatment for students in mathematics; the overall analysis for all math groups combined showed highly significant results favoring the CAI treatment.

These results for math were consistent across all grades, which is an added indication of replicability of this study. Results obtained in Spring of 1980 showed significant gains in mathematics instruction; in 1981, significant gains were also recorded for reading instruction. The CAI programs have had measurable, positive effects on student performance in both math and reading. In Spring, 1982, the reading gains were validated by the Joint Dissemination Review Panel (JDRP), Washington, D.C., which functions out of the Department of Education.

Students Participating in the Evaluative Study

School building sites were selected to constitute a comparison group of Title I students. The study provided comparison students from within Title I classrooms and, from non-CAI schools with Title I programs. Often these students were within the same school building that housed the CAI laboratory and, in those cases, students were assigned to treatment group or comparison group at random. However, in some other cases, students were not available in sufficient numbers to construct both a CAI and a comparison group, within the same building. In these cases, students from neighboring schools, who attended Title I classes, were selected to constitute a comparison group. To minimize the affects of non-random assignment, students in the comparison group at each grade level were deliberately and carefully chosen and groups were tested using the criterion measure as a pretest to determine whether the groups were significantly different at the outset. Where possible, outliers were identified and eliminated so as to make the experimental and comparison groups as similar as possible at the beginning of each program year. The resulting CAI and comparison groups were sufficiently alike that they may safely be considered to have been comparable at the outset of the year's activities. Students in all Title I classes received equal amounts of time with the CAI students assigned, for 10 minutes of their time allotment, to use the CAI terminals each day.

Instruments

Students were tested each fall and spring with the Metro '78 Survey Component, Basic Battery. Appropriate forms and levels of the Metro '78 were used in testing all students participating. All testing was conducted under the supervision of local Chapter I directors and certified classroom teachers who administered and scored the tests. The independent firm of Metrics Associates of Chelmsford, Massachusetts, was contracted to conduct data analysis using the Boston College computer, Chestnut Hill, Massachusetts. Metrics Associates prepared a design that would be robust to the conditions and procedural limitations presented by the learning environments. As part of the design, Metrics analyzed the testing data and compared two groups of students, at several grade levels, in terms of relative gain in achievement using the pre-test/post-test, quasi-experimental research design.[5] Figure 1 shows the research design.

Treatment

Treatments given the two groups, CAI and non-CAI comparison group respectively, were as follows:

> CAI Group: 30 minutes of Title I instruction on a daily basis, with ten minutes of that daily classroom instruction allocated to CAI.
>
> Non-CAI Comparison Group: students in the comparison group also received 30 minutes daily of Title I class instruction but did not interact with the CAI system.

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[5] Metrics Associates, Inc. Evaluation of the Merrimack CAI Project. See evaluation reports for 1979, 1980, 1981 and 1982, four volumes. Chelmsford, Massachusetts: Metrics Associates.

FIGURE 1

Evaluation Design for Merrimack Education Center's Computer-Assisted Instruction Project

Group	Assignment+	Pre* Test	Title I Treatment	Post* Test	Description of Students
Experimental	Random Where Possible	Metro 78 October	CAI and Regular Title I	Metro 78 May	Eligible with greatest need
Comparison	Random Where Possible	Metro 78 October	Regular Title I	Metro 78 May	

+ In several cases, random assignment of students to treatments was not possible. See text for explanation.

* *Metropolitan Achievement Tests, Metro 78, Survey Component, Basic Battery*[6]

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[6] The ETS study of Los Angeles Unified School District also used curriculum specific tests for each grade level composed of 100 to 120 questions taken directly from the CAI curriculum. CAI treatment effect was obtained by a regression analysis which determined the difference in performance between experimental and control groups after adjustments had been made for pretest scores, sex, ethnicity and specific classroom variables. See, Rogosta, et al., 1982.

Data Analysis

Evaluation staff at the Merrimack Education Center verified scoring and conversion of raw scores to scaled scores. Metric Associates staff verified score conversions and constructed data sets from scaled scores and the scaled scores were, in turn, converted first to percentile ranks and then to normal curve equivalents. Treatment effects were translated into equivalent percentile scores whereby NCEs[7] were derived. As a consequence of using NCE scores in all analyses, any combination of grade levels within the same subject area could be legitimately analyzed as a unit. Sufficient numbers of students did not exist at all grade levels to make their individual comparison meaningful. Therefore, grade level groups were combined such that sufficient numbers of children were present in each treatment group. The grade level groups approximated elementary (Grades 2, 3, 4), later elementary (grades 5 and 6) and middle school (grades 7, 8 and 9).

The principal analytical tool used in analyzing the data was analysis of covariance. For each group of grade levels, and for the group as a whole across grades, pre-test NCE scores were used to perform covariance adjustments on post-test NCE scores prior to testing their mean difference for statistical significance.

Having both pre and post measures for each student meant that gains for each student could be inspected to see whether differential gains were present for the two treatment groups. Though they do indeed show the amount of gain experienced by each student, they are inherently rather unreliable, are subject to regression effects and ceiling effects of the instruments used, and do not reflect differential rates of learning which may characterize the groups prior to introduction of the treatments. Gain scores are reported for each group analyzed in an effort to achieve completeness of reporting, but the reader is cautioned concerning their over-interpretation.

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[7] NCE's are Normal Curve Equivalents; this NCE scale closely matches the percentile distribution, hence has some of the qualities of interpretation inherent in percentile scores. According to the Office of Education, any NCE gain greater than zero means that the pupils profited from participating in the project.

Residualized gain scores, i.e., post-test scores that were adjusted to take into account differences between the groups at pre-test time, were reported in each case. These altered post-test scores can then be analyzed by means of analysis of covariance to compensate for initial differences between the treatment groups.

RESULTS

The evaluation study was proposed to determine whether the CAI supplement, to an otherwise traditional Chapter I program, would produce incremental and statistically significant gains in achievement for those students who received the CAI treatment. On standardized tests of mathematics and reading (Metro 78) the CAI students were contrasted with the comparison group.

Reading Results

Table 1 shows results for experimental and comparison groups on both the pre-test and post-test in reading. All analyses here reported were conducted using Noral Curve Equivalent scores (NCEs).

TABLE 1
SUMMARY OF ANALYSES OF COVARIANCE
BY GRADE LEVEL GROUP
CAI READING

1981 Evaluation Report

Grades	N's Exp	N's Comp	Means Pre Exp	Means Pre Comp	SD's Pre Exp	SD's Pre Comp	Pre-Test P	Unadjusted Means Post Exp	Unadjusted Means Post Comp	SD's Post Exp	SD's Post Comp	Adjusted Means Post Exp	Adjusted Means Post Comp	Post-Test P
2	50	70	38.35	38.57	14.49	13.14	.928	47.74	40.90	16.39	16.75	48.17	40.59	.008
3-4	82	99	36.15	38.68	11.00	10.56	.106	40.85	39.26	11.25	13.34	41.67	38.58	.051
5-6	40	63	35.92	37.63	12.52	12.40	.435	42.25	37.95	11.33	11.48	43.26	37.38	.002
7-9	70	35	34.18	38.41	12.39	12.31	.101	42.37	36.76	12.42	16.22	43.31	34.29	<.001
2-9 Comb	242	267	36.59	38.59	12.69	12.36	.055	43.15	39.45	14.29	14.43	43.93	38.64	<.001

The CAI groups in 1981 outperformed the comparison goups consistently at all grades at a statistically significant level (<.001). Table 2 presents an analysis of the mean NCE gain by grade level groups, indicating statistically significant gains in favor of CAI students.

TABLE 2
ANALYSIS OF GAIN SCORES - READING 1981

Grades	N's Exp.	N's Comp.	Mean NCE Gain Exp.	Mean NCE Gain Comp.	P
2	50	70	10.27	1.94	.008
3-4	82	99	4.66	.63	.018
5-6	40	63	6.84	-.28	.001
7-9	70	35	8.12	-1.64	.001
2-9 Combined	286	274	7.00	.72	.001

Mathematics Gains

The evaluation report for 1980 indicates the positive effects of CAI instruction in math as well. First and second grade students gained in total arithmetic achievement 18 NCEs in one year (1981). Gains in mathematics were significantly greater for those in the CAI classes than for those in the comparison groups for all nine grades in 1979. In each of the nine grades, the improvement in mathematics (grade placement and NCE scores) achieved by students in CAI was significantly greater than that achieved by the comparison students. Each of the four CAI grade groups showed a higher average gain on the Metropolitan Achievement Test than the comparison groups.

TABLE 3

ANALYSIS OF GAIN SCORES
BY GRADE LEVEL GROUP

MATHEMATICS - 1980

	N's		Means Pre		Means Post		Mean Gain				
Grades	Exp.	Comp.	Exp.	Comp.	Exp.	Comp.	Exp.	Comp.	t	df	p
1-4	109	121	434.61	403.40	542.40	509.78	107.80	106.38	.16	228	.872
5-6	52	69	581.10	610.93	658.75	665.87	77.65	54.94	2.15	119	.034
7-12	36	89	721.97	666.94	766.69	700.25	44.72	33.30	1.02	123	.309
1-12 combined	197	279	525.79	538.79	614.10	609.14	88.31	70.34	2.82	474	.005

The post-test probabilities, reported at the extreme right of the tables, indicate whether the comparisons are regarded as statistically significant (i.e., .05 or less is regarded as reflecting a significant difference). The overall analysis for all mathematics students showed highly significant results, favoring the CAI treatment; CAI students achieved at a higher level than did the non-CAI students, and the difference is probably not due to chance.

Discussion

For all grade level groups as is shown in Table 1, the CAI reading treatment was significantly more effective in producing achievement gains. Also, the mean NCE gain for CAI students was, in every case, greater than was the corresponding gain for non-CAI students and was statistically significant as is shown in Table 2.

The data presented for reading show the clear, consistent effect of the CAI program. While in all cases pre-test comparisons were slightly in favor of comparison group students, the experimental group (CAI) outperformed comparison groups consistently at all levels. Even unadjusted means portray the consistent effect. The statistically significant effect was replicated across all grade level groupings at probability levels that must be considered educationally meaningful.

The results for mathematics are consistent across all three groups in that the adjusted post-test means for the CAI students are always higher than for the non-CAI students. The results for grades 5 and 6 were not statistically significant, but this was apparently the result of the CAI group having been much lower than the non-CAI group at pre-test time. Analysis of covariance tends to under adjust for pre-test differences to the extent that the groups differ in their pre-test scores. Since the pre-test difference was highly significant, the adjusted post-test difference should actually be larger than it was. Hence, the difference for grades 5 and 6 probably should be regarded as an artifact of imperfect grouping at pre-test time, rather than a departure from the overall significant result.

Analysis Over Three Years

In 1982, it was determined that three data sets were assembled, consisting of: students who continued in the project from year 1 to year 2; students who continued from year 2 to year 3; and students who participated in the program throughout its three-year duration. Normal Curve Equivalent (NCE) gain scores on the Metropolitan Achievement Tests (Metro 78) Survey Component, Basic Battery were used in all analyses for all three years.

Only 52 students continued in the program over its three-year period, resulting in the proposed three-year analyses being abandoned. N's in each of the two-year data sets were sufficient to be analyzed, but serious questions about the representativeness of these samples in respect to their parent populations were raised, which limits the generalizability of this study based upon results of the two-year data sets.

For several reasons, it was determined that the best way in which to view the project was year by year, not longitudinally. Accordingly, data from each of the three years were analyzed, using a common analysis scheme not previously employed. Two-way analysis of variance was the analytical model employed with treatment (CAI or Non-CAI) and grade level as main effects.

Results of Long-Range Analyses

1. CAI vs. Non-CAI as a Main Effect--In 1980 (year 1), the treatment effect was not significant for students in reading ($p=.088$), but was significant ($p=.012$) for students in mathematics, favoring the CAI treatment. In the second year (1981), the CAI group made signficantly greater gains than did the Non-CAI group in reading ($p<.001$) and nearly did so in mathematics ($p=.090$). The "near" significant results with respect to mathematics appeared to be due to the performance of students in one grade level: grade 6. Sixth graders in Spring, 1980, showed a significant difference which favored the Non-CAI approach. On the assumption that the observed grade 6 results were not representative of the rest of the data set for year 2, a separate analysis was conducted excluding students in grade 6. The results were very close to being significant ($p=.061$).

In the third year of the project (1982), significant differences were observed in gain scores, favoring the CAI treatment in both reading ($p=.010$) and mathematics ($p=.044$).

2. Grade Level as a Main Effect--Grade level was a second independent variable used in all analyses. With regard to reading, grade level was significant in years 1 and 2, but no pattern appeared to be present with regard to differential gains as a function of grade level. In year 3, no grade level effect was observed.

Grade level comparisons presented a different pattern for students in mathematics. For all three years, grade level was a statistically significant main effect. Moreover, in each of the three years the greatest gains in mathematics were made at the lowest grade levels and the least gains at the highest grade levels.

3. Interactions Between Main Effects--The interactions between treatment and grade level were tested in each of the three years. None was statistically significant, though the interactions for mathematics in years 2 and 3 were close to being significant.

Discussion

Results of the three-year study showed a clear, and usually significant, effect attributable to the CAI treatment for both reading and mathematics throughout the three-year period. In the third year of program operation, results for both reading and mathematics were significant. No interaction between treatment and grade level was found, though grade level was often a significant effect.

For reading, the treatment effect was uniform, favored the CAI treatment and was independent of grade level throughout the three years of the project. The results for mathematics were more complex. Apparently, Chapter I became less effective in terms of NCE gains produced as grade level increased. However, the CAI treatment in mathematics became more effective as grade level increased.

At the Merrimack Education Center, experience with the Title I program indicates that CAI is effective with low-achieving students and with those students who have fallen behind one or two grade levels as compared with their age mates. When typical classroom instruction is supplemented with CAI drill and practice and tutorial CAI, students gain more than students who receive the regular Chapter I program only. This is especially true for math at upper grade levels.

This structured program, emphasizing basic skills, is also cost-effective. A low per student/per lesson cost, combined with the achievement gain demonstrates cost-effectiveness. Through this collaborative approach with system maintenance, technical assistance and other supportive organizational arrangements, individual school districts can access effective CAI services to augment instruction in compensatory programs which otherwise would be too expensive and difficult to maintain locally.

The cost of providing computer-assisted instruction is well within the per pupil Chapter I allocations of the typical, traditional compensatory programs. Low per student rates per hour have been reported. Also, computer-assisted instruction can reduce the overall time required to attain mastery of a specific objective. If a cost is attached to student time as well as teacher time, then it appears that CAI is highly cost-effective.

Because of proven achievement gains that have resulted in this CAI application, cost-effectiveness can be shown through the comparative study with students who were not using CAI. Recent national emphasis on improving basic skills, and the implications of Proposition 2 1/2 in Massachusetts, cost reduction and proven cost benefits have potential forall school districts. Over the four-year longitudinal program in schools of the Merrimack Valley, CAI has performed an effective intervention. Evaluation reports for each of three years are available from the Merrimack Education Center.[8]

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[8] Metrics Associates, Inc. Evaluation of the Merrimack CAI Project. See evaluation reports for 1979, 1980, 1981 and 1979-82, four volumes. Chelmsford, Massachusetts: Metrics Associates.

Kiesling has estimated the annual cost of a successful program in compensatory education at $200 to $300 per year per student over and above the normal per student school allotment. Costs as high as $600 and $750 per pupil per year have been reported in the literature. Given a very conservative estimate of $500 per terminal per month on the CAI system, and assuming that a terminal can be used by 25 to 30 students per day, the cost of CAI is well within the typical Chapter I allocation, and it is in line with other compensatory programs that are much more labor intensive. By shifting the burden of drill from the classroom teacher to CAI, the instructional program can be brought into better balance between capital expenditures and labor expenses. The less labor intensive the system becomes, the greater the cost effectiveness that can be achieved.

Results of several other studies of the same CAI courseware in a variety of other settings have also been consistently positive and educationally significant.[9] For instance, Macken and Suppes (1976) describe studies in nine states involving a wide variety of student populations. Average, disadvantaged, and handicapped students who utilize this CAI courseware to augment regular instructional programs consistently outperform comparison groups. The Educational Testing Service in a longitudinal study of CAI in Los Angeles Unified School District, reported significant gains for CAI student's computational skills when compared to control students. Furthermore, doubling the amount of time spent on CAI also doubled the gains for the students in their computational skills. Longitudinally, during the second and third years of CAI mathematics, the students significantly increased their gains. Smaller, but consistently positive results were also obtained in the reading and language skills during the first year of CAI; and, these skills were maintained over additional years of CAI.

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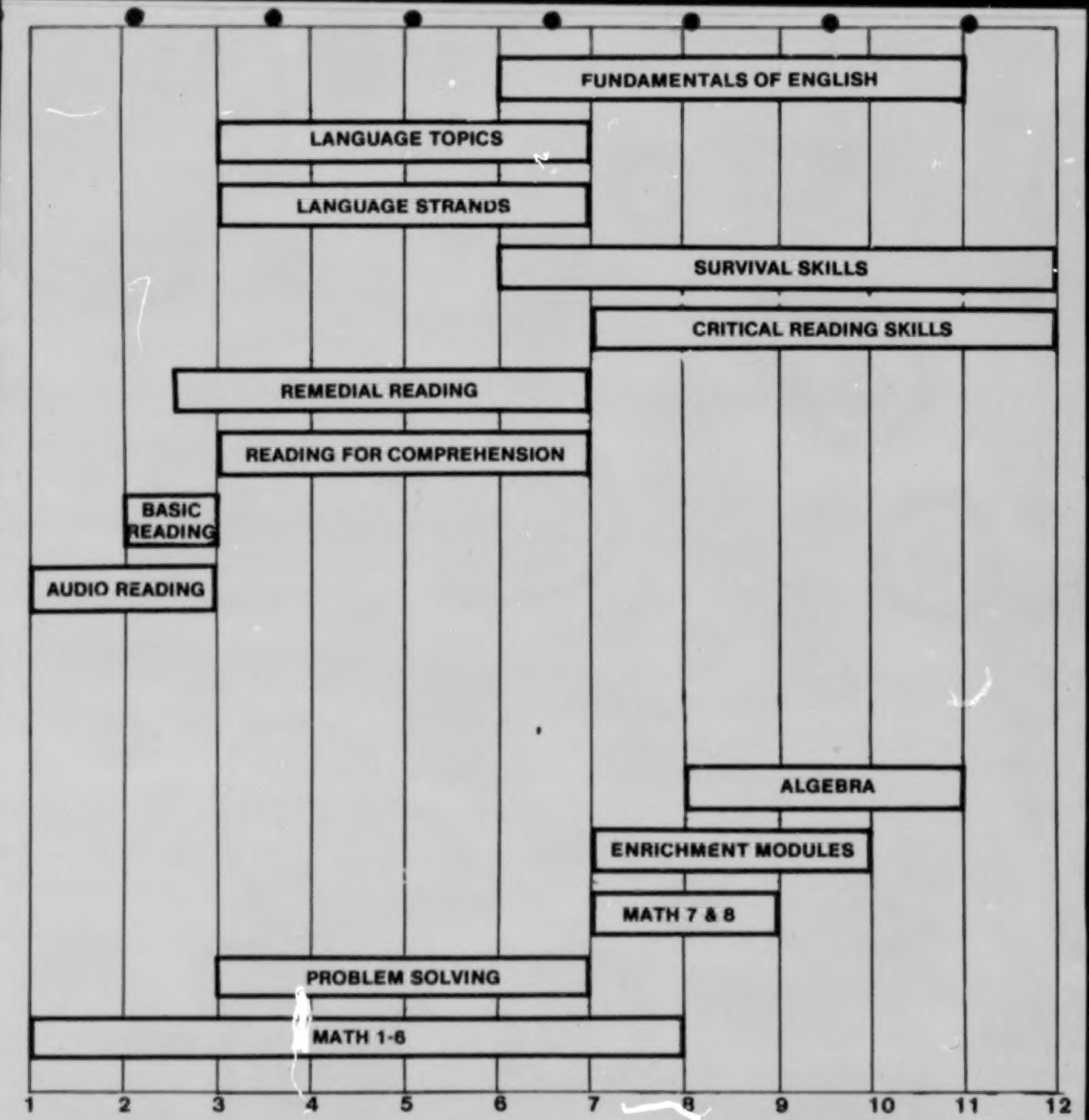
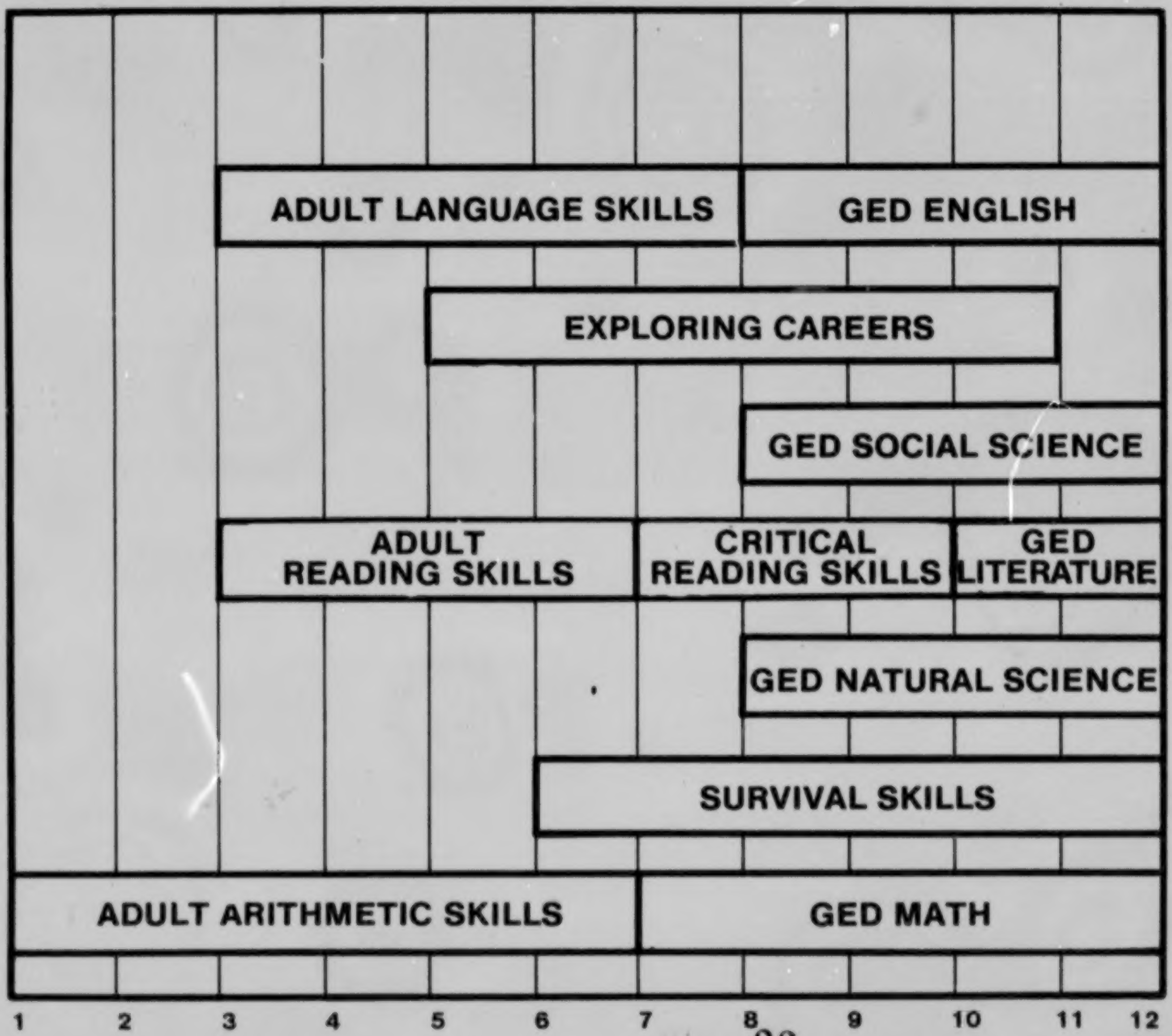
[9] Jamison, D., and Pat Suppes. Estimated costs of computer-assisted instruction for compensatory education. Instructional Technology, 1970, 10, 49-57.

These consistent, statistically significant results in other settings reinforce the results of analysis of the Merrimack Education Center study. Additionally, the Merrimack study demonstrates how an educational collaborative serving multiple school districts, can consistently deliver effective CAI programming concurrently in several school districts and schools.

This model of CAI curriculum is currently being successfully implemented by educational service agencies and local schools across the country. Structured staff training experiences help teachers utilize CAI student feedback to augment the standard curriculum. Manuals and other supportive materials are available. No special computer programming training is required of participating teachers. The computer system is managed at the central facility. While teachers need not learn computer programming or how to manage the hardware, they are trained in prescribing CAI lessons appropriate to indiviudal student's diagnosis and how to effectively use feedback use to select future lessons.



CAI CURRICULUM BY GRADE LEVEL



ADULT CURRICULUM BY GRADE LEVEL

LONGITUDINAL

EVALUATION OF THE

CAI

COMPUTER ASSISTED INSTRUCTION

TITLE I PROJECT

1979-1982

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ABSTRACT

Beginning in the school year 1979-1980, a three year project was begun whose purpose was to determine whether the addition of a computer assisted instruction (CAI) system to regular ESEA Title I programs in reading and mathematics would result in superior student achievement gains as against those observed for Title I students who had not been exposed to CAI. Evaluations conducted in each year generally showed the CAI treatment to have been more effective, when coupled with regular Title I services, than were the regular services alone.

It was determined that a longitudinal analysis of students who continued in the program from one year to the next, and across all three years, was in order to inspect the longer-term effects of CAI in a Title I environment.

Three data sets were assembled, consisting of: 1) students who continued from year 1 to year 2; 2) students who continued from year 2 to year 3; and, 3) students who participated in the program throughout its three year duration. Normal Curve Equivalent (NCE) gain scores on the *Metropolitan Achievement Tests (Metro 78) Survey Component, Basic Battery* were used in all analyses.

N's observed in each of the three longitudinal data sets were disappointing. Only 52 students continued in the program over its three year period, resulting in the proposed three year analyses being abandoned. N's in each of the two year data sets were sufficient to be analyzed, but serious questions about the representativeness of these samples in respect to their parent populations were raised, calling into question both the accuracy and utility of interpretations based upon results from the two-year data sets.

For several reasons, it was determined that the best way in which to view the project was year by year, not longitudinally. Accordingly, data from each of the three years were reanalyzed, using a common analysis scheme not previously employed. Two-way analysis of variance was the analytical model employed with treatment (CAI or Non-CAI) and grade level as main effects.

Results showed a clear, and usually significant, effect attributable to the CAI treatment for both reading and mathematics throughout the three year period. In the third year of program operation, results for both reading and mathematics were significant. No interaction between treatment and grade level was found, though grade level was often a significant effect.

It was recommended that the CAI program continue to be implemented where it is in place and that its implementation be expanded to other Title I programs in reading and in mathematics.

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INTRODUCTION

For the past three years, six communities in northeastern Massachusetts have included computer assisted instruction in their regular ESEA Title I programs. The use of CAI in these programs was predicated on the assumption that its unique properties would produce achievement gains over and above those which are characteristic of conventional approaches to Title I instruction. In the academic years 1979-80 through 1981 - 82, data have been gathered with the objective of determining the relative effectiveness of CAI as against conventional instruction in a compensatory education setting.

In program year 1979-1980, it was found that the CAI treatment was superior to the non-CAI treatment for students in mathematics as reflected by highly significant differences favoring the CAI treatment. For students in reading, it appeared to be the case that the CAI treatment was moderately effective in the lower elementary grades relative to the non-CAI treatment, but that a reversal of effects occurred in the junior high and high school levels.

In program year 1980-81, it was found that the CAI treatment was superior to the non-CAI treatment for students in reading as reflected by highly significant differences which favored the CAI treatment. Differences noted in mathematics favored the CAI treatment in nearly every case, but in many instances were not statistically significant.

Data for program year 1981 - 82 have been gathered and analyzed. Results showed the CAI treatment to have been superior to the Non-CAI treatment in both reading and mathematics.

At first glance, the results from the first two program years (1979-1980, 1980-1981) appear to be in conflict. In fact, several changes in the sites at which the program was conducted had to be made for logistical reasons. This meant that the program, and the students who participated in it, were rather different in the two program years. Also, several problems arose in the first year having to do with evaluation design compliance which served to make the results from that year questionable, though suggestive and encouraging concerning the effectiveness of CAI.

It was determined that a longitudinal analysis of those students who had participated in the program over the three year period was in order. By focussing on the continuing students, two advantages could be obtained. First, analyses could be conducted using the same people rather than a larger, but changing group. Second, any cumulative effects attributable to CAI could be observed.

FILE RESTORATION AND MERGING

At the outset of the program, each student was assigned a unique identification number. This was done for two reasons. First, to enable achievement data for each student to be merged with data generated by the management routines which are part of the CAI system. Second, the numbers were assigned in anticipation of a later longitudinal analysis of the data.

Given the ID numbers, it was possible to match merge the data sets for the first two program years, the last two program years, and across all three years to identify those students who had continued in the program in each of these time spans. There were numerous problems in doing so, however, since the files were not identical in layout. These problems were overcome, though, and all data were restored and given a common format. From the restored files, three new files were constructed. The first file contained data only for those students who had participated in the program in years 1 and 2. A second file contained data for those who had participated in the second and third years. The third file contained all students who had participated throughout the three year period.

In the second year of the program's operation, slightly fewer students were serviced in each of the previously described groups. Overall, 254 students out of the 1226 present in the first year had continued in the program in year 2. Thus, about 21% of the students present in the first year were also present in the second year.

Of the 1107 students who participated in the second year of the program's operation, 163 continued in the third year, or about 15%. Ideally, a group of students of sufficient size to allow meaningful analyses would have been present across the three years of the program's operation. Unfortunately, only 52 cases were found. As a result, analyses had to be carried out in two phases: for years 1 and 2, and for years 2 and 3.

The percentage of students who continued in the first two years, the last two years, and across all three years of the program's operation was disappointing. However, the results do serve to show the extent to which changes in the program had occurred in its second year and to some extent in its third year. These changes were unavoidable for a variety of reasons. Regretably, they required that several sites (and the students serviced at those sites) had to be removed and were, therefore, lost as far as any longitudinal analysis was concerned. But there were other reasons for the low percentage of continuing students. Students serviced in any Title I program enter and leave it depending on factors such as student need for program services, available funding and parental transience. Given these factors, plus the program changes, the number of students who continued in the second and third years of the program's operation is not surprising.

DATA ANALYZED

Several measurements were gathered for each student who participated in the program. Principal evidence concerning attainment of the program's prime objective was obtained using two scales from the _Metropolitan Achievement Tests (Metro 78) Survey Component, Basic Battery_. The scales employed were those in Reading and Mathematics. Appropriate forms and levels of the _Metro 78_ were used in testing all students, and pretest and post test sessions were conducted in compliance with the norm dates. These data constituted the measurements for the longitudinal analyses.

The CAI management system also recorded information concerning the progress of students who interacted with the system. Those data might have been of use in the longitudinal analysis except that the scales used in each year have changed in response to efforts to improve the CAI system. Therefore, the management information could not be used as part of a longitudinal analysis.

For each student, raw scores and scaled scores were obtained using the _Metro 78_. The scaled scores were, in turn, converted first to percentile ranks and then to normal curve equivalents (NCE's). As a consequence of using NCE scores in all analyses, any combination of grade levels within the same subject area could legitimately be analyzed as a unit. This fact was useful in that the N's within grade levels and treatments have been subject to fluctuations from year to year making between grade level comparisons difficult, in many cases.

DESIGN FOR LONGITUDINAL ANALYSES

If the CAI treatment were actually effective relative to the conventional approach, then some predictions could be made about what ought to occur over time. In comparing results from years 1 and 2 for reading, four combinations of treatments are possible and are depicted in Figure 1 (of course, the same idea may be applied to students in mathematics).

Of the four groups, the most consistent and highest gains should be made by those who experienced the CAI treatment in both years (group RCC). Those persons who were not exposed to CAI in either year should show the least gain over the two year period. The other two groups, RNC and RCN should show patterns of achievement which are intermediate between RCC and RNN.

All raw scores have been converted to normal curve equivalent scores (NCE's). Because of this, students at various grade levels may legitimately be combined for analyses. Each person's NCE score, pretest or post test, would show that person's standing relative to his or her appropriate norming group. Furthermore, NCE scores have interval level properties and are normally distributed in the population at large which allows them to be used freely in a wide variety of analytical techniques.

FIGURE 1

Possible Combinations of Treatments
For Students Who Participated In
Years 1 and 2 For Reading

		1981	
		CAI(C)	NON-CAI(N)
1980	CAI(C)	RCC	RCN
	NON-CAI(N)	RNC	RNN

If random assignment of subjects to treatment groups had been accomplished in both 1980 and 1931, and if the CAI treatment had been truly superior to the conventional approach, then the RCC and RNN groups would have begun the two year period at about the same NCE level (expressed as a mean for each group). Both groups would be considerably below average at the outset, as their members had been selected in compliance with Title I guidelines. As year one progressed, the impact of the CAI treatment would have been shown in that the two groups would be significantly different at post test time whereas they had not been significantly different at pretest time. Put another way, the CAI students should have made greater NCE gains than the Non-CAI students across each measuring period.

This type of argument may be extended to a similar analysis of the data from year two (1980-1981). The expectations would be the same as previously described for year 1 except that the RCC group would begin year 2 considerably ahead of its RNN counterparts. Over the course of the program year, the RCC group should show roughly the same gains in NCE scores as was characteristic of the previous year relative to the Non-CAI group. The design for years 1, 2 and 3 simply extended the analytical approach just described.

A Problem in Design Implementation

When the longitudinal analysis was proposed, it was recognized that a special problem might be present in the data for years 1, 2 and 3. Title I guidelines require that each student be evaluated annually to determine his or her eligibility to receive Title I services. Let us assume that the CAI treatment within a given program year was clearly superior to the conventional approach (as was generally the case in each of the annual evaluations). Given this, it is likely that some students would no longer qualify for Title I services at the end of that program year since their deficits would have been compensated for as reflected in "average" as against "below average" performance on standardized tests at the end of the program year. Indeed, the success of CAI would cause more of the successful CAI students to be removed from the program, due to their success, than would be true for Non-CAI students.

To the extent the foregoing is true, then the design originally proposed for longitudinal analysis may yield conflicting and misleading results. Attrition should be highest in the RCC group assuming that CAI was, indeed, an effective adjunct to conventional Title I instruction. If the RNN treatment is actually less effective than the RCC treatment, differential loss of subjects to treatments (mortality) would serve to undermine the confidence one might place in the reported results. That is, whatever effect the RCC treatment had would be blunted in the data analyzed as those students who had gained most while in that treatment would be disqualified for further Title I services. As will be seen, the results obtained in the longitudinal analyses were conflicting and suggested that the original design was probably not the most appropriate one for making judgements concerning the long-term effectiveness of CAI.

RESULTS OF THE LONGITUDINAL ANALYSES

Three Year Analyses

Attempts at assembling a continuing group of students who had been participants in the program throughout its three year period were not very successful. Only 52 students were found. Of these, only about 30 had pre and post test scores which would allow them to be included in the analyses for reading. In mathematics, there were even fewer students. After these small groups were broken down into the various combinations of treatments, comparisons often were based upon only 3 or 4 students in each group. Such comparisons could not possibly have been meaningful. Therefore, the three year data set, and its proposed analyses, were abandoned.

Two Year Analyses

Attention then turned to the two data sets which had been assembled from students who had continued in the program in years 1 and 2 (group "12"), and/or in years 2 and 3 (group "23"), but not necessarily in all three years. For group 12, 254 students were found. For group 23, 163 students were found. In each two year comparison, four possible treatment groups existed: 1) CAI in both years (CC); 2) Non-CAI in both years (NN); 3) CAI in the first year, but not in the second (CN); and, 4) No CAI in the first year, but CAI in the second year (NC). The N's in each of these groups for reading and for mathematics are given for the 12 and 23 data sets in Tables 1 and 2. However, some of the records contained in the combined files were first graders in the regular Title I program who were not part of the CAI project. As a result, the N's reported in Tables 1 and 2 are somewhat lower than those just reported.

Even when broken down by grade level, the N's in both data sets were large enough that analyses could be undertaken with a reasonable chance of obtaining meaningful results. Therefore, analysis was undertaken. Figure 2 shows the comparisons which were made in each of the data sets. Since the data sets each spanned a two year period, four measuring points were available. For the 12 data set the points are referred to as Pre1, Post1, Pre2, and Post2. For the 23 data set, the measuring points are Pre2, Post2, Pre3 and Post3. Note that both data sets include a common measuring point: Pre2.

Data Analyzed

All analyses herein described involved the use of Normal Curve Equivalent scores (NCE's). At every measuring point, each student's raw score on the Metropolitan Achievement Tests (Metro 78) was converted to the

TABLE 1

Number of Students Receiving Each Reading Treatment Combination in the Year 1-Year 2 and Year 2-Year 3 Longitudinal Files

		Year 2		
		CAI	Non-CAI	Totals
Year 1	CAI	63	7	70
	Non-CAI	9	57	65
	Totals	72	63	135

		Year 3		
		CAI	Non-CAI	Totals
ear 2	CAI	40	9	49
	Non-CAI	5	42	47
	Totals	45	51	96

TABLE 2

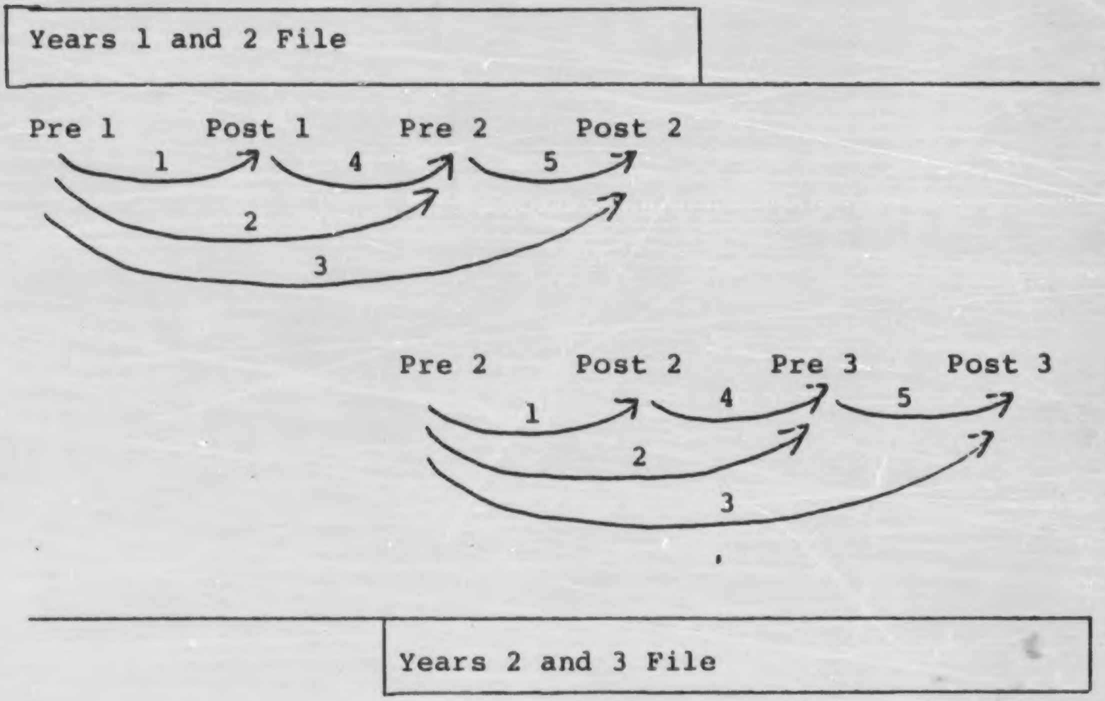
Number of Students Receiving Each Mathematics Treatment Combination in the Year 1-Year 2 and Year 2-Year 3 Longitudinal Files

		Year 2		
		CAI	Non-CAI	Totals
Year 1	CAI	26	3	29
	Non-CAI	4	47	51
	Totals	30	50	80

		Year 3		
		CAI	Non-CAI	Totals
Year 2	CAI	26	7	33
	Non-CAI	0	15	15
	Totals	26	22	48

FIGURE 2

Illustration of the 5 NCE gains analyzed for the years 1-2 and years 2-3 longitudinal data sets


Years 1 and 2 File
Pre 1
Post 1
Pre 2
Post 2
1
4
5
2
3
Pre 2
Post 2
Pre 3
Post 3
1
4
5
2
3
Years 2 and 3 File

corresponding scaled score. The scaled score was then converted into a percentile rank. Finally, the percentile rank was converted to its corresponding NCE score. All conversions were performed by table lookup procedures using a computer to minimize human recording and conversion errors. Only the NCE scores were used for statistical analyses since they alone allow near complete flexibility in assembling groups for analysis.

Figure 2 shows the five comparisons of interest in each of the two year data sets. For comparisons 1, 2 and 3, the first measurement obtained for students in the data set was used as the base from which NCE gains to the appropriate post test criterion were measured. This was done in order 1) that the longer term effects of being exposed to CAI could be measured, 2) that possible trends could be observed for each treatment group and, 3) that comparisons could be made among the several treatment groups. Comparison 4 reflects the differential gains or losses made by students in each treatment group over the summer vacation period. Comparison 5 shows that the gains made by students in the second of the two years represented in each data set.

Given the presumed effectiveness of CAI relative to conventional approaches to Title I instruction, it was reasonable to assume that the greatest gains in either data set (12 or 23) would be made by students in the CC group. Further, one would expect that the difference in gains made by members of the CC group might increase at each measuring

TABLE 3

Summary of Results in Reading for the Five Gains Analyzed for the Year 1-2 and Year 2-3 Longitudinal Data Sets

	CAI group Gain or Loss	Treatment		Grade		Interaction		
		F	P	F	P	F	P	Total
1	+ 1.39	.266	.608	.618	.605	.438	.727	81
2	- 7.26	5.926	.017	1.266	.292	.240	.868	81
3	+ 4.05	1.857	.177	.787	.505	.579	.631	80
4	- 7.86	9.875	.002	1.556	.208	.427	.734	79
5	+11.56	15.220	.001	2.090	.109	1.369	.259	80
	Years 2 and 3 Data Set							
1	+ 2.80	1.175	.282	1.818	.153	.869	.462	72
2	+ 2.55	1.003	.320	.437	.727	.321	.810	73
3	+ 6.59	4.929	.030	1.638	.190	.058	.982	69
4	- .29	.012	.915	1.636	.190	.553	.648	72
5	+ 4.28	2.868	.095	3.619	.018	.084	.969	69

TABLE 4

Summary of Results in Mathematics for the Five Gains Analyzed for the Year 1-2 and Year 2-3 Longitudinal Data Sets

	CAI group Gain or Loss	Treatment		Grade		Interaction		
		F	P	F	P	F	P	Total
1	- 1.06	.052	.820	3.819	.009	.024	.999	60
2	+ 4.48	1.472	.230	5.068	.001	1.051	.389	68
3	+ 2.29	.593	.445	4.230	.005	.724	.579	65
4	+ 6.09	1.480	.230	3.193	.021	.921	.459	59
5	- 2.36	.483	.490	2.390	.062	1.448	.231	64
Years 2 and 3 Data Set								
1	- 4.36	1.145	.294	3.203	.028	.343	.847	37
2	-15.52	14.647	.001	1.742	.170	.708	.593	37
3	- 7.98	3.356	.082	1.074	.396	.234	.916	30
4	-11.49	12.639	.001	3.122	.030	.625	.649	38
5	+ 5.3	1.595	.221	1.274	.312	.680	.613	31

point in the data set resulting in the CC and NN groups diverging over time with the CC group ending up considerably ahead of the NN group at the end of the two year period represented by each data set.

Representativeness of the Two Year Data Sets

Before attempting to interpret the findings in the 12 and 23 data sets, a prior question needed to be answered: are the students who were included in either or both of the data sets representative of all students who participated in the project in each year of its operation? There is some evidence which indicates that the 12 and 23 data sets were not representative of the three years of program operation. To the extent that this is true, results of their analyses become much less useful.

Undertaking any longitudinal analysis of the project data assumes that the project has remained essentially unchanged throughout the three year period. In many respects, this has not been the case. The sites used for CAI and for comparison students have not been constant over the years for a variety of quite ligitimate reasons. The CAI curriculum supplied by Computer Curriculum Corporation has evolved each year in an effort to make it more flexible, useful and effective. Emphases given different grade levels and curriculum areas were changed considerably between years 1 and 2 based upon experiences gained in the project's first year. In fact, though much of the project's intent and methods has remained the same in each year, it is probably most sensible to regard each year of operation as being a separate entity rather than a replication of previous years. For this reason, the data obtained in each of the three years of the project's operation were reanalyzed using the same analytical approach. Results of these reanalyses are presented following those for the longitudinal data sets.

Analyses of Variance for Longitudinal Data

In each of the two longitudinal data sets, five two-way analyses of variance were performed on NCE gains. Each of the five gain scores analyzed represented a different part of the gains made by students in the data set. Of particular interest are gains 1, 5 and 3 which show progress in the first of the two years, the second of the two years, and across the two year period, respectively. Tables 5 and 6 summarize the results of the five analyses for the 12 and 23 data sets in reading and in mathematics. Complete results for these analyses are given in Appendix A. Only grade levels for which both CAI and Non-CAI students existed were included in these analyses in order to ensure proper comparisons at each level. For reading, grades 3 through 6 qualified and in mathematics, grades 2 through 6 qualified.

TABLE 5

Two-Way Analysis of Variance of Mean NCE Gains By Treatment and Grade Level for Year 1 Students in Reading

```
* * * * * * * * * * * * * *   C E L L   M E A N S   * * * * * * * * * * * * * *
              RGAIN      READING NCE GAIN
           BY RGP        READING GROUP
              V3         GRADE LEVEL 80
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


TOTAL POPULATION

       5.69
  (    710)


RGP
         1          2

       5.35       5.96
  (    316) (     394)


V3
         2          3          4          5          6          7          8          9         10         11         12

       6.81       9.32       3.91       4.91       9.70      -1.19        0.0       5.30       5.93       4.76       5.13
  (     72) (     100) (     105) (     107) (      52) (      45) (       0) (     122) (      57) (      30) (      20)


            V3
                    2          3          4          5          6          7          8          9         10         11         12
RGP
         1        5.39       7.74       4.33       4.35       9.29       2.17        0.0       1.97       6.78       2.36       5.19
             (     13) (      60) (      49) (      33) (      38) (      12) (       0) (      47) (      34) (      21) (       9)

         2        7.13      11.69       3.54       5.16      10.80      -2.42        0.0       7.39       4.66      10.38       5.09
             (     59) (      40) (      56) (      74) (      14) (      33) (       0) (      75) (      23) (       9) (      11)
```

TABLE 5

(continued)

```
* * * * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *
               RGAIN     READING NCE GAIN
            BY RGP       READING GROUP
               V3        GRADE LEVEL 80
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                         SUM OF                      MEAN              SIGNIF
SOURCE OF VARIATION                     SQUARES       DF            SQUARE        F      OF F

MAIN EFFECTS                           5268.957       10           526.896    3.476     0.000
   RGP                                  442.459        1           442.459    2.919     0.088
   V3                                  5202.008        9           578.001    3.813     0.000

2-WAY INTERACTIONS                     1516.406        9           168.490    1.112     0.352
   RGP       V3                        1516.405        9           168.489    1.112     0.352

EXPLAINED                              6785.375       19           357.125    2.356     0.001

RESIDUAL                             104590.250      690           151.580

TOTAL                                111375.625      709           157.088


   1226 CASES WERE PROCESSED.
    516 CASES ( 42.1 PCT) WERE MISSING.
```

TABLE 5

(continued)

```
***   M U L T I P L E   C L A S S I F I C A T I O N   A N A L Y S I S   ***
               RGAIN    READING NCE GAIN
          BY   RGP      READING GROUP
               V3       GRADE LEVEL 80
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

GRAND MEAN =      5.69
                                                        ADJUSTED FOR
                                          UNADJUSTED    INDEPENDENTS
VARIABLE + CATEGORY               N       DEV'N   ETA   DEV'N    BETA

RGP
    1 CAI YR 1                   316      -0.34         -0.93
    2 NON-CAI YR 1               394       0.28          0.75
                                                  0.02           0.07

V3
    2 GRADE TWO                   72       1.12          0.68
    3 GRADE THREE                100       3.63          3.89
    4 GRADE FOUR                 105      -1.78         -1.74
    5 GRADE FIVE                 107      -0.78         -1.01
    6 GRADE SIX                   52       4.01          4.49
    7 GRADE SEVEN                 45      -6.88         -7.18
    9 GRADE EIGHT AND NINE       122      -0.39         -0.49
   10 GRADE TEN                   57       0.24          0.49
   11 GRADE ELEVEN                30      -0.93         -0.50
   12 GRADE TWELVE                20      -0.55         -0.55
                                                  0.21           0.22

MULTIPLE R SQUARED                                               0.047
MULTIPLE R                                                       0.218
```

TABLE 6

Two-Way Analysis of Variance of Mean NCE Gains By Treatment and Grade Level for Year 1 Students in Mathematics

```
* * * * * * * * * * * * * * *   C E L L   M E A N S   * * * * * * * * * * * * * * *
              MGAIN      MATH NCE GAIN
           BY MGP        MATH GROUP
              V3         GRADE LEVEL 80
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


TOTAL POPULATION

    11.29
(    504)


MGP
        1         2

    13.32      9.75
(    218) (,   286)


V3
        1         2         3         4        ,5         6         7         8         9

    22.47     22.18     15.18      5.10      9.00      8.33       0.0       0.0      4.80
(     62) (     48) (     83) (     48) (     59) (     62) (      0) (      0) (    142)



          V3
                    1         2         3         4         5         6         7         8         9
MGP
        1       22.90     22.15     15.62      7.81      9.74     12.54       0.0       0.0      8.33
          (        23) (     24) (     45) (     21) (     41) (     11) (      0) (      0) (     53)

        2       22.21     22.20     14.65      3.00      7.33      7.43       0.0       0.0      2.70
          (        39) (     24) (     38) (     27) (     18) (     51) (      0) (      0) (     89)
```

TABLE 6

(continued)

```
* * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * *
              MGAIN    MATH NCE GAIN
           BY MGP      MATH GROUP
              V3       GRADE LEVEL 80
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                      SUM OF                  MEAN          SIGNIF
SOURCE OF VARIATION                  SQUARES      DF        SQUARE       F    OF F

MAIN EFFECTS                       24429.980       7      3489.997  20.858   0.000
   MGP                              1074.099       1      1074.099   6.419   0.012
   V3                              22851.387       6      3808.564  22.762   0.000

2-WAY INTERACTIONS                   586.215       6        97.702   0.584   0.743
   MGP       V3                      586.215       6        97.702   0.584   0.743

EXPLAINED                          25016.250      13      1924.327  11.501   0.000

RESIDUAL                           81987.375     490       167.321

TOTAL                             107003.625     503       212.731

   1226 CASES WERE PROCESSED.
    722 CASES ( 58.9 PCT) WERE MISSING.
```

TABLE 6

(continued)

```
* * *   M U L T I P L E   C L A S S I F I C A T I O N   A N A L Y S I S   * * *
              MGAIN     MATH NCE GAIN
          BY  MGP       MATH GROUP
              V3        GRADE LEVEL 80
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

GRAND MEAN =     11.29
                                                               ADJUSTED FOR
                                                UNADJUSTED     INDEPENDENTS
VARIABLE + CATEGORY                    N        DEV'N   ETA    DEV'N   BETA

MGP
    1 CAI YR 1                       218         2.03           1.74
    2 NON-CAI YR 1                   286        -1.55          -1.33
                                                         0.12           0.10

V3
    1 GRADE ONE                       62        11.17          11.36
    2 GRADE TWO                       48        10.88          10.68
    3 GRADE THREE                     83         3.88           3.55
    4 GRADE FOUR                      48        -6.19          -6.20
    5 GRADE FIVE                      59        -2.29          -3.10
    6 GRADE SIX                       62        -2.96          -2.18
    9 GRADE SEVEN - ELEVEN           142        -6.49          -6.31
                                                         0.47           0.46

MULTIPLE R SQUARED                                                     0.228
MULTIPLE R                                                             0.478
```

The two main effects analyzed in each instance were treatment group, i.e., CAI or Non-CAI, and grade level. Only two treatment groups were analyzed out of the possible four. Students who were in the CAI group in one year but not in the other year were not able to be analyzed as their numbers were quite uneven, generally very small and occasionally non-existent. Indeed, it should be pointed out that the N's for all treatment groups generally were rather small and very likely are not representative of their parent populations.

The longitudinal results for reading appear to bear out what was observed in each year of the program's operation. In the 12 data set, gain 1 was not significant, but favored the CAI group. Gain 5 was highly significant and favored the CAI group. Thus, in both years results observed in the 12 data set correspond with those observed in the parent data sets for years 1 and 2 of the program.

Gain 3 represents the relative gains made by students over the two year period. In the 12 data set, gain 3 for reading was not significant but favored the CAI treatment and approached significance. Had gain 1 been significant, gain 3 might have been as well.

Thus, in the first two-year comparison, the CAI treatment was generally superior to the Non-CAI treatment for reading with the most marked gains being made in the second year. In none of the five analyses was grade level statistically significant, nor were any of the treatment by grade level interactions.

In the 23 data set, gain 1 favored the CAI treatment for reading but was not significant. Gain 5 was nearly significant and again favored the CAI treatment in reading. The relative gains made by students across the two year period is represented by gain 3. In the 23 data set gain 3 was significant and favored the CAI treatment in reading. Other comparisons within the 23 data set were not significant with the exception of grade level in gain 5.

For students in the reading program in each of the two year periods, it seems relatively safe to conclude that the CAI treatment was more effective on a longitudinal basis than was the Non-CAI treatment, though the results are not compelling. It is also of interest to note the gain 4 results which show the relative gains or losses over the summer break in both of the two year periods. In the 12 data set the CAI students lost more ground over the summer than did Non-CAI students. The corresponding gain in the 23 data set was slightly in favor of the Non-CAI students as well, but was not significant. This may be a finding of importance, but the shakey representativeness of the two data sets and their rather small N's suggest caution in interpreting the finding.

The results of analyzing gains made in mathematics in the 12 and 23 data sets were disappointing in that the N's which resulted were small. In the 12 data set, no treatment comparison yielded statistically significant results. Grade level was nearly always significant which corresponds with results found in analyzing the parent populations from years 1 and 2 of the program's operation. The N's which resulted for mathematics students in the 23 data set were so small that little meaningful interpretation may safely be invested in them. However, it is intriguing to note that the CAI students in mathematics, as was the case in reading, lost ground relative to the Non-CAI students during the summer break as is reflected in gain 4 results for mathematics.

Since this is one finding that was consistent in both reading and mathematics it may be of importance in spite of the small N's. Because the data from each of the three years suggest that the CAI treatment is superior to the Non-CAI treatment, the potential problem noted earlier may have been present and responsible for the apparent decline of the CAI students over each summer period. That is, the success of the CAI treatment in each year of the program may have caused differential loss of subjects in order to maintain compliance with Title I guidelines. The net effects of this may have been 1) to cause the continuing CAI students to appear to have lost ground relative to their Non-CAI counterparts over the summer periods, and 2) to have caused the apparent gains made by CAI students in other comparisons to have been depressed.

REANALYSES OF EACH PROGRAM YEAR'S DATA

Clearly, attempts at meaningful longitudinal analyses were not very successful for quite legitimate reasons. Given this, and the fact that the program and the students it served in each year were rather different, it seemed that the best way to sum up the apparent effect of CAI in the three years of the project's operation was by separate analyses of the three data sets generated in the three years in which the program had been in operation, apart from whether students continued from year to year.

Data obtained in each of the three project years were subjected to two-way analysis of variance. In each analysis, the dependent variable was the NCE gain score achieved by each student. Independent variables were treatment (CAI or Non-CAI) and grade level. The interaction between treatment and grade level was also of interest, and was tested.

The N's in each of the cells which constituted the treatment by grade level matrix were uneven. However, the analysis employed compensated for such non-orthogonal designs. Also, no data obtained in any year have been eliminated from analyses because they were presumed to have been "outliers", etc. Thus, the results here reported represent all usable cases observed in each of the program years.

In years 1 and 2, some collapsing across grade levels was carried out in order that sufficient N's would be present in the CAI and Non-CAI groups at those grade levels. The collapsing was legitimate and is described in the reports for years 1 and 2. In year 1, grades 8 and 9 were combined in reading and grades 7 through 11 were combined for mathematics. In year 2, grades 10 through 12 were combined for reading.

Results of the analyses performed are summarized under three general headings: the CAI as against Non-CAI treatment; the grade level effect; and, the interaction between treatment and grade level. Tables 5 through 10 present the results of the analyses of variance performed. Descriptive statistics for pretest, post test and gain scores appear in Appendix B. Each of the tables is in three sections. The first section presents N's and mean NCE gain scores for the total group, for each treatment and grade level, and for each treatment by grade level cell in the analysis. The second section gives a complete analysis of variance table. The last section shows how each subgroup in each main effect deviated from the grand mean both initially, and after adjustments had been made for main effects and the interaction.

TABLE 7

Two-Way Analysis of Variance of Mean NCE Gains By Treatment and Grade Level for Year 2 Students in Reading

```
* * * * * * * * * * * * * * *  C E L L   M E A N S  * * * * * * * * * * * * * *
            RGAIN      READING NCE GAIN
         BY RGP        READING GROUP
            W3         GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


TOTAL POPULATION

      4.16
 (    621)


RGP
        1          2

      6.96       1.57
 (    299)  ( .  322)


W3
        2          3          4          5          6          7          8          9         10         11

      5.41       3.58       1.25       1.94      10.25      -0.26       1.64      10.14       0.0        6.33
 (    120)  (     94)  (     87)  (     88)  (     50)  (     55)  (     28)  (     38)  (      0)  (     61)



          W3
                   2          3          4          5          6          7          8          9         10         1
RGP
        1      10.27       4.82       4.53       6.79      11.23       0.93       4.91      12.93       0.0        6.
          (       50)  (     38)  (     44)  (     32)  (     43)  (     46)  (      8)  (     25)  (      0)  (     1

        2       1.94       2.73      -2.10      -0.83       4.19      -6.32       0.60       4.76       0.0        6.
          (       70)  (     56)  (     43)  (     56)  (      7)  (      9)  (     20)  (     13)  (      0)  (     4
```

TABLE 7

(continued)

```
* * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *
             RGAIN    READING NCE GAIN
          BY RGP      READING GROUP
             W3       GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                        SUM OF                   MEAN            SIGNIF
SOURCE OF VARIATION                    SQUARES      DF          SQUARE        F    OF F

MAIN EFFECTS                         10701.332       9        1189.037    7.410   0.000
   RGP                                4588.453       1        4588.453   28.594   0.000
   W3                                 6196.512       8         774.564    4.827   0.000

2-WAY INTERACTIONS                    1045.348       8         130.668    0.814   0.590
   RGP       W3                       1045.350       8         130.669    0.814   0.590

EXPLAINED                            11746.688      17         690.981    4.306   0.000

RESIDUAL                             96762.125     603         160.468

TOTAL                               108508.813     620         175.014

   1107 CASES WERE PROCESSED.
    486 CASES ( 43.9 PCT) WERE MISSING.
```

TABLE 7

(continued)

```
* * *   M U L T I P L E   C L A S S I F I C A T I O N   A N A L Y S I S   * * *
             RGAIN    READING NCE GAIN
         BY  RGP      READING GROUP
             W3       GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

GRAND MEAN =      4.16

                                                           ADJUSTED FOR
                                           UNADJUSTED     INDEPENDENTS
VARIABLE + CATEGORY                  N      DEV'N  ETA     DEV'N   BETA

RGP
    1 CAI YR 2                      299      2.80           3.06
    2 NON-CAI YR 2                  322     -2.60          -2.84
                                                   0.20            0.22

W3
    2 GRADE TWO                     120      1.25           1.63
    3 GRADE THREE                    94     -0.59          -0.13
    4 GRADE FOUR                     87     -2.91          -3.06
    5 GRADE FIVE                     88     -2.23          -1.53
    6 GRADE SIX                      50      6.08           3.85
    7 GRADE SEVEN                    55     -4.42          -6.52
    8 GRADE EIGHT                    28     -2.33          -1.17
    9 GRADE NINE                     38      5.97           4.93
   11 GRADE TEN - TWELVE             61      2.17           3.75
                                                   0.24            0.24

MULTIPLE R SQUARED                                                 0.099
MULTIPLE R                                                         0.314
```

TABLE 8

Two-Way Analysis of Variance of Mean NCE Gains By Treatment and Grade Level for Year 2 Students in Mathematics

```
* * * * * * * * * * * * * *   C E L L   M E A N S   * * * * * * * * * * *
               MGAIN      MATH NCE GAIN
            BY MGP        MATH GROUP
               W3         GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


TOTAL POPULATION

      6.97
(     353)


MGP
         1          2

      7.80       6.34
(     151) (     202)


W3
         1          2          3          4          5          6

     13.04      11.11       5.52       4.65       3.06       4.44
(      54) (      67) (      61) (      77) (      74) (      20)


           W3
                    1          2          3          4          5          6
MGP
          1     21.47      15.73       6.13       4.52       3.29       2.55
           (      15) (      24) (      26) (      37) (      35) (      14)

          2      9.79       8.54       5.07       4.77       2.86       8.93
           (      39) (      43) (      35) (      40) (      39) (       6)
```

TABLE 8

(continued)

```
* * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *
             MGAIN    MATH NCE GAIN
          BY MGP      MATH GROUP
             W3       GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                     SUM OF                   MEAN               SIGNIF
SOURCE OF VARIATION                 SQUARES       DF         SQUARE        F       OF F

MAIN EFFECTS                       5574.809        6        929.135    4.120    0.001
   MGP                              637.444        1        637.444    2.826    0.094
   W3                              5392.680        5       1078.536    4.782    0.000

2-WAY INTERACTIONS                 1824.484        5        364.897    1.618    0.155
   MGP       W3                    1824.484        5        364.897    1.618    0.155

EXPLAINED                          7399.313       11        672.665    2.983    0.001

RESIDUAL                          76907.500      341        225.535

TOTAL                             84306.813      352        239.508

   1107 CASES WERE PROCESSED.
    754 CASES ( 68.1 PCT) WERE MISSING.
```

TABLE 8

(continued)

```
* * *   M U L T I P L E   C L A S S I F I C A T I O N   A N A L Y S I S   * *
              MGAIN     MATH NCE GAIN
         BY   MGP       MATH GROUP
              W3        GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

GRAND MEAN =      6.97
                                                           ADJUSTED FOR
                                              UNADJUSTED   INDEPENDENTS
VARIABLE + CATEGORY                    N      DEV'N  ETA   DEV'N   BETA

MGP
    1 CAI YR 2                        151      0.83          1.59
    2 NON-CAI YR 2                    202     -0.62         -1.19
                                                     0.05          0.09

W3
    1 GRADE ONE                        54      6.07          6.48
    2 GRADE TWO                        67      4.15          4.34
    3 GRADE THREE                      61     -1.44         -1.44
    4 GRADE FOUR                       77     -2.32         -2.46
    5 GRADE FIVE                       74     -3.90         -4.03
    6 GRADE SIX                        20     -2.53         -3.29
                                                     0.24          0.26

MULTIPLE R SQUARED                                                 0.066
MULTIPLE R                                                         0.257
```

TABLE 9

Two-Way Analysis of Variance of Mean
NCE Gains By Treatment and Grade Level
for Year 3 Students in Reading

```
* * * * * * * * * * * * * * *   C E L L   M E A N S   * * * * * * *
              RGAIN       READING NCE GAIN
           BY RGP         READING GROUP
              X3          GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


TOTAL POPULATION

       5.27
 (   308)


RGP
         1          2

      6.65       3.56
 (   170) (     138)


X3
         2          3          4          5          6

      6.34       5.92       2.48       5.02       7.01
 (    60) (      58) (      64) (      72) (      54)


          X3
                     2          3          4          5          6
RGP
             1    8.50       7.42       5.08       4.66       8.24
             (     26) (      35) (      33) (      40) (      36)

             2    4.69       3.63      -0.29       5.47       4.56
             (     34) (      23) (      31) (      32) (      18)
```

TABLE 9

(continued)

```
* * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *
                RGAIN     READING NCE GAIN
             BY RGP       READING GROUP
                X3        GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                        SUM OF                  MEAN          SIGNIF
SOURCE OF VARIATION                    SQUARES      DF         SQUARE      F     OF F

MAIN EFFECTS                          1437.717       5        287.543   2.867   0.015
   RGP                                 676.411       1        676.411   6.743   0.010
   X3                                  707.510       4        176.878   1.763   0.136

2-WAY INTERACTIONS                     371.533       4         92.883   0.926   0.449
   RGP       X3                        371.533       4         92.883   0.926   0.449

EXPLAINED                             1809.250       9        201.028   2.004   0.039

RESIDUAL                             29891.695     298        100.308

TOTAL                                31700.945     307        103.260

    590 CASES WERE PROCESSED.
    282 CASES ( 47.8 PCT) WERE MISSING.
```

TABLE 10

Two-Way Analysis of Variance of Mean NCE Gains By Treatment and Grade Level for Year 3 Students in Mathematics

```
* * * * * * * * * * * * * * *   C E L L   M E A N S   * * * * * * * * * * * *
               MGAIN      MATH NCE GAIN
            BY MGP        MATH GROUP
               X3         GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


TOTAL POPULATION

    10.94
 (   172)


MGP
       1          2

    13.02       9.36
 (    74)  (     98)


X3
       1          2          3          4          5          6

    10.40      19.47      12.62       6.87      11.15       3.31
 (    16)  (     29)  (     28)  (     37)  (     43)  (     19)


          X3
                  1          2          3          4          5          6
MGP
       1        8.70      28.34       8.67      10.85      11.90       4.23
            (     4)  (     13)  (      8)  (     15)  (     24)  (     10)

       2       10.97      12.26      14.19       4.16      10.21       2.29
            (    12)  (     16)  (     20)  (     22)  (     19)  (      9)
```

TABLE 10

(continued)

```
* * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * *
            MGAIN     MATH NCE GAIN
         BY MGP       MATH GROUP
            X3        GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                     SUM OF                     MEAN             SIGNIF
SOURCE OF VARIATION                 SQUARES        DF          SQUARE       F     OF F

MAIN EFFECTS                       4582.270         6         763.711    4.716   0.000
   MGP                              668.513         1         668.513    4.128   0.044
   X3                              4019.493         5         803.898    4.964   0.000

2-WAY INTERACTIONS                 1821.902         5         364.380    2.250   0.052
   MGP        X3                   1821.903         5         364.380    2.250   0.052

EXPLAINED                          6404.172        11         582.197    3.595   0.000

RESIDUAL                          25911.691       160         161.948

TOTAL                             32315.863       171         188.982


    590 CASES WERE PROCESSED.
    418 CASES ( 70.8 PCT) WERE MISSING.
```

TABLE 10

(continued)

```
* * *   M U L T I P L E   C L A S S I F I C A T I O N   A N A L Y S I S   *
                 MGAIN     MATH NCE GAIN
            BY   MGP       MATH GROUP
                 X3        GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

GRAND MEAN =     10.94
                                                          ADJUSTED FOR
                                             UNADJUSTED   INDEPENDENTS
VARIABLE + CATEGORY                   N      DEV'N  ETA   DEV'N   BETA

MGP
     1 CAI YR 3                      74       2.08         2.33
     2 NON-CAI YR 3                  98      -1.57        -1.76
                                                    0.13          0.15

X3
     1 GRADE ONE                     16      -0.54         0.20
     2 GRADE TWO                     29       8.53         8.46
     3 GRADE THREE                   28       1.68         2.27
     4 GRADE FOUR                    37      -4.07        -3.96
     5 GRADE FIVE                    43       0.22        -0.30
     6 GRADE SIX                     19      -7.63        -8.02
                                                    0.35          0.35

MULTIPLE R SQUARED                                                0.142
MULTIPLE R                                                        0.377
```

CAI vs. Non-CAI as a Main Effect

In year 1 the treatment effect was not significant for students in reading (p=.088), but was significant (p=.012) for students in mathematics. The difference observed for mathematics favored the CAI treatment. In the second year, the CAI group made significantly greater gains than did the Non-CAI group in reading (p<.001) and nearly did so in mathematics (p=.090). The "near" significant results with respect to mathematics appeared to be due to the performance of students in one grade level: grade 6. Sixth graders in year 2 showed a significant difference which favored the Non-CAI approach. On the assumption that the observed grade 6 results were not representative of the rest of the data set for year 2, a separate analysis was conducted excluding students in grade 6. The results were very close to being significant (p=.061).

In the third year of the project, significant differences were observed in gain scores which favored the CAI treatment for both reading (p=.010) and mathematics (p=.044).

Grade Level as a Main Effect

Grade level was a second independent variable used in all analyses. With regard to reading, grade level was significant in years 1 and 2, but no pattern appeared to be present with regard to differential gains as a function of grade level. In year 3, no grade level effect was observed.

Grade level comparisons presented a different pattern for students in mathematics. For all three years, grade level was a statistically significant main effect. Moreover, in each of the three years the greatest gains in mathematics were made at the lowest grade levels and the least gains at the highest grade levels.

Interactions Between Main Effects

The interactions between treatment and grade level were tested in each of the three years. None was statistically significant, though the interactions for mathematics in years 2 and 3 were close to being significant.

From all this it is reasonable to conclude that for reading the treatment effect was uniform, favored the CAI treatment and was independent of grade level throughout the three years of the project. The results for mathematics are more complex. Apparently Title I becomes less effective in terms of NCE gains produced as grade level increases. However, the CAI treatment in mathematics became more effective as grade level increased.

Implications

The CAI reading system should continue to be implemented at all grade levels. The effectiveness of Title I instruction will differ by grade level from year to year but will probably not be a function of grade level and CAI. Rather, any differences in reading will most likely be a result of the implementation of the program at a particular participating school.

The CAI mathematics system should continue to be implemented. However, users should be aware of the following likely outcomes. They should expect a decline generally in the effectiveness of mathematics Title I programs as grade level increases. At the same time, however, they should expect the CAI mathematics treatment to become more effective relative to the Non-CAI treatment as grade level increases.

At the most general level, the CAI program in both reading and mathematics should be continued in the schools where they are currently implemented and should be promoted elsewhere as useful additions/extensions to existing Title I programs.

APPENDIX A

TABLE A1
Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Reading for the Year 1 - Year 2 Longitudinal File
GAIN 1

```
* * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * *
             RG1      READING GAIN PRE YR1 TO POST YR1
          BY RGP      READING TREATMENT GROUP
             W3       GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                        SUM OF                  MEAN           SIGNIF
SOURCE OF VARIATION                    SQUARES       DF        SQUARE       F    OF F

MAIN EFFECTS                           253.766        4        63.442   0.509   0.729
   RGP                                  33.139        1        33.139   0.266   0.608
   W3                                  231.380        3        77.127   0.618   0.605

2-WAY INTERACTIONS                     163.673        3        54.558   0.438   0.727
   RGP       W3                        163.673        3        54.558   0.438   0.727

EXPLAINED                              417.441        7        59.634   0.478   0.847

RESIDUAL                              9103.250       73       124.702

TOTAL                                 9520.691       80       119.009


     254 CASES WERE PROCESSED.
     173 CASES ( 68.1 PCT) WERE MISSING.
```

TABLE A2

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Reading for the Year 1 - Year 2 Longitudinal File

GAIN 2

```
* * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * *
           RG2       READING GAIN PRE YR1 TO PRE YR2
        BY RGP       READING TREATMENT GROUP
           W3        GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                         SUM OF                    MEAN              SIGNIF
SOURCE OF VARIATION                     SQUARES        DF         SQUARE        F      OF F

MAIN EFFECTS                           1620.969         4        405.242    2.566     0.045
   RGP                                  936.016         1        936.016    5.926     0.017
   W3                                   600.113         3        200.038    1.266     0.292

2-WAY INTERACTIONS                      113.838         3         37.946    0.240     0.868
   RGP       W3                         113.838         3         37.946    0.240     0.868

EXPLAINED                              1734.809         7        247.830    1.569     0.158

RESIDUAL                              11530.035        73        157.946

TOTAL                                 13264.844        80        165.811

    254 CASES WERE PROCESSED.
    173 CASES ( 68.1 PCT) WERE MISSING.
```

TABLE A3

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Reading for the Year 1 - Year 2 Longitudinal File

GAIN 3

```
* * * * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * * * *
        RG3      READING GAIN PRE YR1 TO POST YR2
     BY RGP      READING TREATMENT GROUP
        W3       GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                             SUM OF                         MEAN                SIGNIF
SOURCE OF VARIATION                         SQUARES         DF            SQUARE           F      OF F

MAIN EFFECTS                                605.012          4           151.253       0.993     0.417
   RGP                                      282.920          1           282.920       1.857     0.177
   W3                                       359.710          3           119.903       0.787     0.505

2-WAY INTERACTIONS                          264.748          3            88.249       0.579     0.631
   RGP       W3                             264.748          3            88.249       0.579     0.631

EXPLAINED                                   869.762          7           124.252       0.815     0.577

RESIDUAL                                  10970.582         72           152.369

TOTAL                                     11840.344         79           149.878


    254 CASES WERE PROCESSED.
    174 CASES ( 68.5 PCT) WERE MISSING.
```

TABLE A4
Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Reading for the Year 1 - Year 2 Longitudinal File
GAIN 4

```
* * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *
         RG4      READING GAIN OVER SUMMER
      BY RGP      READING TREATMENT GROUP
         W3       GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                      SUM OF                  MEAN            SIGNIF
SOURCE OF VARIATION                  SQUARES      DF        SQUARE        F     OF F

MAIN EFFECTS                        1685.373       4       421.343    4.019    0.005
   RGP                              1035.261       1      1035.261    9.875    0.002
   W3                                489.325       3       163.108    1.556    0.208

2-WAY INTERACTIONS                   134.384       3        44.795    0.427    0.734
   RGP        W3                     134.384       3        44.795    0.427    0.734

EXPLAINED                           1819.758       7       259.965    2.480    0.025

RESIDUAL                            7443.414      71       104.837

TOTAL                               9263.172      78       118.759


    254 CASES WERE PROCESSED.
    175 CASES ( 68.9 PCT) WERE MISSING.
```

TABLE A5
Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Reading for the Year 1 - Year 2 Longitudinal File
GAIN 5

```
* * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *
           RG5      READING GAIN PRE YR2 TO POST YR2
        BY RGP      READING TREATMENT GROUP
           W3       GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                      SUM OF                    MEAN              SIGNIF
SOURCE OF VARIATION                  SQUARES        DF         SQUARE        F     OF F

MAIN EFFECTS                        3215.696         4        803.924    5.321    0.001
   RGP                              2299.257         1       2299.257   15.220    0.000
   W3                                947.072         3        315.690    2.090    0.109

2-WAY INTERACTIONS                   620.667         3        206.889    1.369    0.259
   RGP       W3                      620.667         3        206.889    1.369    0.259

EXPLAINED                           3836.363         7        548.052    3.628    0.002

RESIDUAL                           10877.211        72        151.072

TOTAL                              14713.574        79        186.248

     254 CASES WERE PROCESSED.
     174 CASES ( 68.5 PCT) WERE MISSING.
```

TABLE A6

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Mathematics for the Year 1 - Year 2 Longitudinal File

GAIN 1

```
* * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * *
          MG1      MATH GAIN PRE YR1 TO POST YR1
       BY MGP      MATHEMATICS TREATMENT GROUP
          W3       GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                      SUM OF                    MEAN             SIGNIF
SOURCE OF VARIATION                  SQUARES        DF        SQUARE        F      OF F

MAIN EFFECTS                        3397.633         5       679.527    3.063     0.017
   MGP                                11.592         1        11.592    0.052     0.820
   W3                               3388.950         4       847.237    3.819     0.009

2-WAY INTERACTIONS                    20.942         4         5.235    0.024     0.999
   MGP        W3                      20.942         4         5.235    0.024     0.999

EXPLAINED                           3418.678         9       379.842    1.712     0.111

RESIDUAL                           11093.520        50       221.870

TOTAL                              14512.098        59       245.968

   254 CASES WERE PROCESSED.
   194 CASES ( 76.4 PCT) WERE MISSING.
```

TABLE A7

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Mathematics for the Year 1 - Year 2 Longitudinal File

GAIN 2

```
* * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *
           MG2      MATH GAIN PRE YR1 TO PRE YR2
        BY MGP      MATHEMATICS TREATMENT GROUP
           W3       GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                    SUM OF                  MEAN            SIGNIF
SOURCE OF VARIATION                SQUARES      DF         SQUARE       F     OF F

MAIN EFFECTS                      3565.746       5        713.149   4.116    0.003
   MGP                             254.982       1        254.982   1.472    0.230
   W3                             3512.106       4        878.026   5.068    0.001

2-WAY INTERACTIONS                 728.153       4        182.038   1.051    0.389
   MGP       W3                    728.156       4        182.039   1.051    0.389

EXPLAINED                         4293.898       9        477.100   2.754    0.009

RESIDUAL                         10049.055      58        173.260

TOTAL                            14342.953      67        214.074

    254 CASES WERE PROCESSED.
    186 CASES ( 73.2 PCT) WERE MISSING.
```

TABLE A8
Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Mathematics for the Year 1 - Year 2 Longitudinal File
GAIN 3

```
* * * * * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * * *
              MG3        MATH GAIN PRE YR1 TO POST YR2
           BY MGP        MATHEMATICS TREATMENT GROUP
              W3         GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                          SUM OF                      MEAN          SIGNIF
SOURCE OF VARIATION                      SQUARES      DF            SQUARE       F    OF F

MAIN EFFECTS                            3066.309       5           613.262   3.500   0.008
   MGP                                   103.855       1           103.855   0.593   0.445
   W3                                   2965.313       4           741.328   4.230   0.005

2-WAY INTERACTIONS                       507.337       4           126.834   0.724   0.579
   MGP        W3                         507.337       4           126.834   0.724   0.579

EXPLAINED                               3573.648       9           397.072   2.266   0.031

RESIDUAL                                9637.922      55           175.235

TOTAL                                  13211.570      64           206.431


    254 CASES WERE PROCESSED.
    189 CASES ( 74.4 PCT) WERE MISSING.
```

TABLE A9

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Mathematics for the Year 1 - Year 2 Longitudinal File

GAIN 4

```
* * * * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *
                    MG4       MATH GAIN OVER SUMMER
                 BY MGP       MATHEMATICS TREATMENT GROUP
                    W3        GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                                                    MEAN               SIGNIF
                                         SUM OF                                           OF F
SOURCE OF VARIATION                     SQUARES         DF        SQUARE          F      OF F

MAIN EFFECTS                           3317.424          5       663.485      2.600     0.037
   MGP                                  377.751          1       377.751      1.480     0.230
   W3                                  3258.445          4       814.611      3.193     0.021

2-WAY INTERACTIONS                      940.294          4       235.074      0.921     0.459
   MGP       W3                         940.295          4       235.074      0.921     0.459

EXPLAINED                              4257.719          9       473.080      1.854     0.082

RESIDUAL                              12502.586         49       255.155

TOTAL                                 16760.305         58       288.971


     254 CASES WERE PROCESSED.
     195 CASES ( 76.8 PCT) WERE MISSING.
```

TABLE A10

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Mathematics for the Year 1 - Year 2 Longitudinal File

GAIN 5

```
* * * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *
              MG5      MATH GAIN PRE YR2 TO PCST YR2
           BY MGP      MATHEMATICS TREATMENT GROUP
              W3       GRADE LEVEL 81
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                     SUM OF                MEAN              SIGNIF
SOURCE OF VARIATION                 SQUARES      DF      SQUARE        F      OF F

MAIN EFFECTS                       1295.082       5     259.016    1.953     0.101
   MGP                               64.006       1      64.006    0.483     0.490
   W3                              1267.795       4     316.948    2.390     0.062

2-WAY INTERACTIONS                  768.258       4     192.064    1.448     0.231
   MGP        W3                    768.258       4     192.064    1.448     0.231

EXPLAINED                          2063.340       9     229.260    1.729     0.105

RESIDUAL                           7160.914      54     132.610

TOTAL                              9224.254      63     146.417


     254 CASES WERE PROCESSED.
     190 CASES ( 74.8 PCT) WERE MISSING.
```

TABLE A11

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Reading for the Year 2 - Year 3 Longitudinal File

GAIN 1

```
* * * * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * * * *
          RG1       READING GAIN PRE YR2 TO POST YR2
       BY RGP       READING TREATMENT GROUP
          X3        GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                        SUM OF                      MEAN               SIGNIF
SOURCE OF VARIATION                    SQUARES       DF           SQUARE        F       OF F

MAIN EFFECTS                           868.338        4          217.084    1.842     0.132
   RGP                                 138.495        1          138.495    1.175     0.282
   X3                                  642.914        3          214.305    1.818     0.153

2-WAY INTERACTIONS                     307.095        3          102.365    0.869     0.462
   RGP        X3                       307.094        3          102.365    0.869     0.462

EXPLAINED                             1175.434        7          167.919    1.425     0.211

RESIDUAL                              7542.805       64          117.856

TOTAL                                 8718.238       71          122.792


    163 CASES WERE PROCESSED.
     91 CASES ( 55.8 PCT) WERE MISSING.
```

TABLE A12

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Reading for the Year 2 - Year 3 Longitudinal File

GAIN 2

```
* * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *
               RG2       READING GAIN PRE YR2 TO PRE YR3
            BY RGP       READING TREATMENT GROUP
               X3        GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                          SUM OF                    MEAN              SIGNIF
SOURCE OF VARIATION                      SQUARES        DF        SQUARE        F      OF F

MAIN EFFECTS                             297.460         4        74.365    0.643     0.634
   RGP                                   116.034         1       116.034    1.003     0.320
   X3                                    151.584         3        50.528    0.437     0.727

2-WAY INTERACTIONS                       111.300         3        37.100    0.321     0.810
   RGP        X3                         111.300         3        37.100    0.321     0.810

EXPLAINED                                408.762         7        58.395    0.505     0.828

RESIDUAL                                7519.988        65       115.692

TOTAL                                   7928.750        72       110.122


    163 CASES WERE PROCESSED.
     90 CASES ( 55.2 PCT) WERE MISSING.
```

TABLE A13

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Reading for the Year 2 - Year 3 Longitudinal File

GAIN 3

```
* * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * *
         RG3      READING GAIN PRE YR2 TO POST YR3
      BY RGP      READING TREATMENT GROUP
         X3       GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                    SUM OF                    MEAN              SIGNIF
SOURCE OF VARIATION                SQUARES      DF          SQUARE        F       OF F

MAIN EFFECTS                      1352.440       4         338.110    2.310     0.068
   RGP                             721.271       1         721.271    4.929     0.030
   X3                              719.145       3         239.715    1.638     0.190

2-WAY INTERACTIONS                  25.378       3           8.459    0.058     0.982
   RGP       X3                     25.378       3           8.459    0.058     0.982

EXPLAINED                         1377.820       7         196.831    1.345     0.245

RESIDUAL                          8927.020      61         146.345

TOTAL                            10304.840      68         151.542


     163 CASES WERE PROCESSED.
      94 CASES ( 57.7 PCT) WERE MISSING.
```

TABLE A14

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Reading for the Year 2 - Year 3 Longitudinal File

GAIN 4

```
* * * * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * * * *
          RG4      READING GAIN OVER SUMMER
       BY RGP      READING TREATMENT GROUP
          X3       GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                         SUM OF                    MEAN              SIGNIF
SOURCE OF VARIATION                     SQUARES       DF          SQUARE        F     OF F

MAIN EFFECTS                            635.909        4         158.977    1.248    0.300
   RGP                                    1.476        1           1.476    0.012    0.915
   X3                                   625.184        3         208.395    1.636    0.190

2-WAY INTERACTIONS                      211.460        3          70.487    0.553    0.648
   RGP        X3                        211.460        3          70.487    0.553    0.648

EXPLAINED                               847.371        7         121.053    0.951    0.475

RESIDUAL                               8150.836       64         127.357

TOTAL                                  8998.207       71         126.735


    163 CASES WERE PROCESSED.
     91 CASES ( 55.8 PCT) WERE MISSING.
```

TABLE A15

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Reading for the Year 2 - Year 3 Longitudinal File

GAIN 5

```
* * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *
           RG5      READING GAIN PRE YR3 TO POST YR3
        BY RGP      READING TREATMENT GROUP
           X3       GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                      SUM OF                   MEAN             SIGNIF
SOURCE OF VARIATION                  SQUARES       DF         SQUARE        F    OF F

MAIN EFFECTS                        1333.952        4        333.488    3.140   0.021
   RGP                               304.584        1        304.584    2.868   0.095
   X3                               1153.029        3        384.343    3.619   0.016

2-WAY INTERACTIONS                    26.715        3          8.905    0.084   0.969
   RGP        X3                      20.715        3          8.905    0.084   0.969

EXPLAINED                           1360.668        7        194.381    1.830   0.098

RESIDUAL                            6479.012       61        106.213

TOTAL                               7839.680       68        115.289


      163 CASES WERE PROCESSED.
       94 CASES ( 57.7 PCT) WERE MISSING.
```

TABLE A16

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Mathematics for the Year 2 - Year 3 Longitudinal File

GAIN 1

```
* * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *
           MG1      MATH GAIN PRE YR2 TO POST YR2
        BY MGP
           X3       GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                   SUM OF                    MEAN            SIGNIF
SOURCE OF VARIATION               SQUARES        DF        SQUARE       F      OF F

MAIN EFFECTS                     2060.006         5       412.001   2.951     0.030
   MGP                            159.879         1       159.879   1.145     0.294
   X3                            1788.661         4       447.165   3.205     0.028

2-WAY INTERACTIONS                191.471         4        47.868   0.343     0.847
   MGP       X3                   191.471         4        47.868   0.343     0.847

EXPLAINED                        2251.476         9       250.164   1.792     0.116

RESIDUAL                         3769.223        27       139.601

TOTAL                            6020.699        36       167.242


     163 CASES WERE PROCESSED.
     126 CASES ( 77.3 PCT) WERE MISSING.
```

TABLE A17

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Mathematics for the Year 2 - Year 3 Longitudinal File

GAIN 2

```
* * * * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * * * *
          MG2        MATH GAIN PRE YR2 TO PRE YR3
       BY MGP
          X3         GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                   SUM OF                     MEAN             SIGNIF
SOURCE OF VARIATION                SQUARES      DF           SQUARE        F    OF F

MAIN EFFECTS                      2982.954       5          596.591    4.316   0.005
   MGP                            2024.510       1         2024.510   14.847   0.001
   X3                              963.070       4          240.767    1.742   0.170

2-WAY INTERACTIONS                 391.687       4           97.922    0.708   0.593
   MGP       X3                    391.687       4           97.922    0.708   0.593

EXPLAINED                         3374.641       9          374.960    2.713   0.022

RESIDUAL                          3732.020      27          138.223

TOTAL                             7106.660      36          197.407


     163 CASES WERE PROCESSED.
     126 CASES ( 77.3 PCT) WERE MISSING.
```

TABLE A18

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Mathematics for the Year 2 - Year 3 Longitudinal File

GAIN 3

```
* * * * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * * * *
              MG3      MATH GAIN PRE YR2 TO POST YR3
           BY MGP
              X3       GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                                SUM OF                        MEAN              SIGNIF
SOURCE OF VARIATION                            SQUARES       DF             SQUARE         F      OF F

MAIN EFFECTS                                  1264.070        5            252.814     1.967     0.128
   MGP                                         431.438        1            431.438     3.355     0.082
   X3                                          552.049        4            138.012     1.074     0.396

2-WAY INTERACTIONS                             120.093        4             30.023     0.234     0.916
   MGP       X3                                120.093        4             30.023     0.234     0.916

EXPLAINED                                     1384.163        9            153.796     1.196     0.350

RESIDUAL                                      2571.187       20            128.559

TOTAL                                         3955.350       29            136.391


      163 CASES WERE PROCESSED.
      133 CASES ( 81.6 PCT) WERE MISSING.
```

TABLE A10
Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Mathematics for the Year 2 - Year 3 Longitudinal File
GAIN 4

```
* * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * *
          MG4      MATH GAIN OVER SUMMER
       BY HGP
          X3       GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                       SUM OF                    MEAN              SIGNIF
SOURCE OF VARIATION                   SQUARES      DF          SQUARE        F      OF F

MAIN EFFECTS                         1996.048       5         399.209    4.471     0.004
   HGP                               1128.462       1        1128.462   12.639     0.001
   X3                                1115.098       4         278.774    3.122     0.030

2-WAY INTERACTIONS                    223.038       4          55.760    0.625     0.649
   HGP       X3                       223.038       4          55.759    0.625     0.649

EXPLAINED                            2219.086       9         246.565    2.762     0.019

RESIDUAL                             2499.914      28          89.283

TOTAL                                4719.000      37         127.541


    163 CASES WERE PROCESSED.
    125 CASES ( 76.7 PCT) WERE MISSING.
```

TABLE A20

Two-Way Analyses of Variance of Mean NCE Gains by Treatment and Grade Level for Five Longitudinal Gains in Mathematics for the Year 2 - Year 3 Longitudinal File

GAIN 5

```
* * * * * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * * * *
              MG5       MATH GAIN PRE YR3 TO POST YR3
           BY MGP
              X3        GRADE LEVEL 82
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *


                                          SUM OF                       MEAN           SIGNIF
SOURCE OF VARIATION                      SQUARES       DF            SQUARE        F     OF F

MAIN EFFECTS                             784.473        5           156.895    1.286    0.307
   MGP                                   194.521        1           194.521    1.595    0.221
   X3                                    621.762        4           155.440    1.274    0.312

2-WAY INTERACTIONS                       331.832        4            82.958    0.680    0.613
   MGP        X3                         331.832        4            82.958    0.680    0.613

EXPLAINED                               1116.305        9           124.034    1.017    0.458

RESIDUAL                                2561.892       21           121.995

TOTAL                                   3678.197       30           122.607

    163 CASES WERE PROCESSED.
    132 CASES ( 81.0 PCT) WERE MISSING.
```

TABLE A21

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 1 - Year 2 Longitudinal File

READING PRETEST YEAR 1

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   V31        READING PRETEST NCE SCORE 80
    BROKEN DOWN BY   W3         GRADE LEVEL 81
                BY   RGP        READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                    CODE     VALUE LABEL                       SUM          MEAN        STD DEV      VARIANCE          N

FOR ENTIRE POPULATION                                              4243.2993       31.4318      11.5211      132.7350     (   135)


W3                            2.     GRADE TWO                      496.0999       29.1823      19.1712      367.5340     (    17)
   RGP                        2.     NON YR 1, NON YR 2             387.6999       32.3083      21.4769      461.2553     (    12)
   RGP                        3.     NON YR 1, CAI YR 2             108.4000       21.6800      10.1001      102.0120     (     5)

W3                            3.     GRADE THREE                    499.9999       33.3333       6.8705       47.2038     (    15)
   RGP                        1.     CAI YR 1, CAI YR 2             176.9000       35.3800       6.5641       43.0870     (     5)
   RGP                        2.     NON YR 1, NON YR 2             196.9000       32.8167       6.0284       36.3417     (     6)
   RGP                        3.     NON YR 1, CAI YR 2             126.2000       31.5500       9.5137       90.5100     (     4)

W3                            4.     GRADE FOUR                    1117.7998       33.8727       6.8780       47.3070     (    33)
   RGP                        1.     CAI YR 1, CAI YR 2             804.4999       33.5208       6.6809       44.6348     (    24)
   RGP                        2.     NON YR 1, NON YR 2             313.2999       34.8111       7.7163       59.5411     (     9)

W3                            5.     GRADE FIVE                     776.8999       29.8808      11.7316      137.6360     (    26)
   RGP                        1.     CAI YR 1, CAI YR 2             284.2000       31.5778      15.8602      251.5469     (     9)
   RGP                        2.     NON YR 1, NON YR 2             492.6999       28.9823       9.3169       86.8053     (    17)

W3                            6.     GRADE SIX                      395.6999       30.4385      13.8996      193.1975     (    13)
   RGP                        1.     CAI YR 1, CAI YR 2             270.9999       30.1111      10.2121      104.2861     (     9)
   RGP                        2.     NON YR 1, NON YR 2             124.7000       31.1750      22.2182      493.6491     (     4)

W3                            7.     GRADE SEVEN                    440.4999       31.4643       8.1620       66.6179     (    14)
   RGP                        1.     CAI YR 1, CAI YR 2             440.4999       31.4643       8.1620       66.6179     (    14)

W3                            8.     GRADE EIGHT                    111.7000       27.9250       9.4171       88.6826     (     4)
   RGP                        2.     NON YR 1, NON YR 2             111.7000       27.9250       9.4171       88.6826     (     4)

W3                            9.     GRADE NINE                      23.0000       23.0000       0.0           0.0        (     1)
   RGP                        2.     NON YR 1, NON YR 2              23.0000       23.0000       0.0           0.0        (     1)

W3                           10.     GRADE TEN                      209.9000       29.9857      13.0708      170.8447     (     7)
   RGP                        1.     CAI YR 1, CAI YR 2              58.1000       29.0500      12.2329      149.6451     (     2)
   RGP                        2.     NON YR 1, NON YR 2             115.7000       38.5667      12.6263      159.4233     (     3)
   RGP                        4.     CAI YR 1, NON YR 2              36.1000       18.0500       7.0004       49.0050     (     2)

W3                           11.     GRADE ELEVEN                   171.7000       34.3400      17.5027      306.3429     (     5)
   RGP                        4.     CAI YR 1, NON YR 2             171.7000       34.3400      17.5027      306.3429     (     5)

  TOTAL CASES =      244
MISSING CASES =      109 OR  44.7 PCT.
```

TABLE A22
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 1 - Year 2 Longitudinal File
READING POST TEST YEAR 1

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   V33       READING POSTTEST NCE SCORE 80
    BROKEN DOWN BY   W3        GRADE LEVEL 81
                BY   RGP       READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE      VALUE LABEL                    SUM           MEAN        STD DEV       VARIANCE        N

FOR ENTIRE POPULATION                                          4995.3993        38.7240       10.8609       117.9596     (  129)


W3                         2.       GRADE TWO                   781.5999        45.9765       12.2086       149.0506     (   17)
   RGP                     2.       NON YR 1, NON YR 2          543.9999        45.3333       12.7574       162.7515     (   12)
   RGP                     3.       NON YR 1, CAI YR 2          237.6000        47.5200       12.0174       144.4170     (    5)

W3                         3.       GRADE THREE                 484.7000        44.0636        8.5570        73.2225     (   11)
   RGP                     1.       CAI YR 1, CAI YR 2          221.9000        44.3800        3.8363        14.7170     (    5)
   RGP                     2.       NON YR 1, NON YR 2          262.8000        43.8000       11.5969       134.4880     (    6)

W3                         4.       GRADE FOUR                 1291.7998        40.3687        9.2868        86.2448     (   32)
   RGP                     1.       CAI YR 1, CAI YR 2          970.4998        40.4375        9.6327        92.7894     (   24)
   RGP                     2.       NON YR 1, NON YR 2          321.3000        40.1625        8.7748        76.9970     (    8)

W3                         5.       GRADE FIVE                  878.5999        35.1440        9.6298        92.7325     (   25)
   RGP                     1.       CAI YR 1, CAI YR 2          317.1000        39.6375        8.0615        64.9884     (    8)
   RGP                     2.       NON YR 1, NON YR 2          561.4999        33.0294        9.7888        95.8197     (   17)

W3                         6.       GRADE SIX                   450.7000        34.6692        9.2414        85.4040     (   13)
   RGP                     1.       CAI YR 1, CAI YR 2          303.8000        33.7556        7.4081        54.8803     (    9)
   RGP                     2.       NON YR 1, NON YR 2         ,146.9000        36.7250       13.6795       187.1292     (    4)

W3                         7.       GRADE SEVEN                 513.3999        36.6714        7.1813        51.5714     (   14)
   RGP                     1.       CAI YR 1, CAI YR 2          513.3999        36.6714        7.1813        51.5714     (   14)

W3                         8.       GRADE EIGHT                  93.4000        23.3500        9.5880        91.9300     (    4)
   RGP                     2.       NON YR 1, NON YR 2           93.4000        23.3500        9.5880        91.9300     (    4)

W3                         9.       GRADE NINE                   17.3000        17.3000        0.0            0.0        (    1)
   RGP                     2.       NON YR 1, NON YR 2           17.3000        17.3000        0.0            0.0        (    1)

W3                        10.       GRADE TEN                   277.5000        39.6429       15.3537       235.7362     (    7)
   RGP                     1.       CAI YR 1, CAI YR 2           72.7000        36.3500       10.2530       105.1250     (    2)
   RGP                     2.       NON YR 1, NON YR 2          142.8000        47.6000       20.2517       410.1300     (    3)
   RGP                     4.       CAI YR 1, NON YR 2           62.0000        31.0000       11.3137       128.0000     (    2)

W3                        11.       GRADE ELEVEN                206.4000        41.2800        9.5740        91.6620     (    5)
   RGP                     4.       CAI YR 1, NON YR 2          206.4000        41.2800        9.5740        91.6620     (    5)

  TOTAL CASES =      244
MISSING CASES =      115 OR  47.1 PCT.
```

TABLE A23

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 1 - Year 2 Longitudinal File

READING PRETEST YEAR 2

```
-------------------- D E S C R I P T I O N   O F   S U B P O P U L A T I O N S --------------------
CRITERION VARIABLE    W31         READING PRETEST NCE SCORE 81
    BROKEN DOWN BY    W3          GRADE LEVEL 81
                BY    RGP         READING TREATMENT GROUP
-----------------------------------------------------------------------------------------------------

VARIABLE                  CODE     VALUE LABEL                 SUM          MEAN        STD DEV       VARIANCE        N

FOR ENTIRE POPULATION                                       4727.8993      35.0215      11.0805       122.7777    (  135)

W3                          2.     GRADE TWO                 697.3999      41.0235      10.7339       115.2157    (   17)
   RGP                      2.     NON YR 1, NON YR 2        505.5000      42.1250      11.5436       133.2548    (   12)
   RGP                      3.     NON YR 1, CAI YR 2        191.9000      38.3800       9.0574        82.0370    (    5)

W3                          3.     GRADE THREE               614.6999      40.9800      11.7285       137.5574    (   15)
   RGP                      1.     CAI YR 1, CAI YR 2        192.0000      38.4000       5.8992        34.8000    (    5)
   RGP                      2.     NON YR 1, NON YR 2        283.8000      47.3000      15.1054       228.1719    (    6)
   RGP                      3.     NON YR 1, CAI YR 2        138.9000      34.7250       8.4913        72.1025    (    4)

W3                          4.     GRADE FOUR               1134.7998      34.3879       8.6044        74.0361    (   33)
   RGP                      1.     CAI YR 1, CAI YR 2        783.8998      32.6625       8.8148        77.7016    (   24)
   RGP                      2.     NON YR 1, NON YR 2        350.9000      38.9889       6.3250        40.0061    (    9)

W3                          5.     GRADE FIVE                851.1999      32.7385      10.5873       112.0904    (   26)
   RGP                      1.     CAI YR 1, CAI YR 2        257.5000      28.6111      13.7200       188.2386    (    9)
   RGP                      2.     NON YR 1, NON YR 2        593.6999      34.9235       8.1466        66.3669    (   17)

W3                          6.     GRADE SIX                 437.5000      36.4583      12.1751       148.2336    (   12)
   RGP                      1.     CAI YR 1, CAI YR 2        274.7000      34.3375      11.4356       132.0113    (    8)
   RGP                      2.     NON YR 1, NON YR 2        162.8000      40.7000      14.1249       199.5134    (    4)

W3                          7.     GRADE SEVEN               470.3999      33.6000       7.6000        57.7600    (   14)
   RGP                      1.     CAI YR 1, CAI YR 2        470.3999      33.6000       7.6000        57.7600    (   14)

W3                          8.     GRADE EIGHT               107.5000      26.8750      11.0834       122.8425    (    4)
   RGP                      2.     NON YR 1, NON YR 2        107.5000      26.8750      11.0834       122.8425    (    4)

W3                          9.     GRADE NINE                 23.0000      23.0000       0.0            0.0      (    1)
   RGP                      2.     NON YR 1, NON YR 2         23.0000      23.0000       0.0            0.0      (    1)

W3                         10.     GRADE TEN                 208.7999      26.1000      16.1405       260.5170    (    8)
   RGP                      1.     CAI YR 1, CAI YR 2         47.8000      23.9000      32.3855      1048.8194    (    2)
   RGP                      2.     NON YR 1, NON YR 2        111.4000      27.8500      14.5715       212.3299    (    4)
   RGP                      4.     CAI YR 1, NON YR 2         49.6000      24.8000      10.6066       112.5000    (    2)

W3                         11.     GRADE ELEVEN              182.6000      36.5200      11.5454       133.2970    (    5)
   RGP                      4.     CAI YR 1, NON YR 2        182.6000      36.5200      11.5454       133.2970    (    5)

  TOTAL CASES =      244
MISSING CASES =      109 OR  44.7 PCT.
```

TABLE A24

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 1 - Year 2 Longitudinal File

READING POST TEST YEAR 2

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - -
CRITERION VARIABLE    W33        READING POSTTEST NCE SCORE 81
    BROKEN DOWN BY    W3         GRADE LEVEL 81
                BY    RGP        READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                    CODE    VALUE LABEL                  SUM          MEAN        STD DEV       VARIANCE        N

FOR ENTIRE POPULATION                                         5149.1992      38.4269      13.0764      170.9925    (   134)


W3                            2.    GRADE TWO                  713.3999      41.9647      18.6874      349.2174    (    17)
   RGP                        2.    NON YR 1, NON YR 2         524.5999      43.7167      21.7346      472.4015    (    12)
   RGP                        3.    NON YR 1, CAI YR 2         188.8000      37.7600       8.1522       66.4580    (     5)

W3                            3.    GRADE THREE                649.4999      43.3000      16.4285      269.8942    (    15)
   RGP                        1.    CAI YR 1, CAI YR 2         214.0000      42.8000       9.0896       82.6260    (     5)
   RGP                        2.    NON YR 1, NON YR 2         206.2000      34.3667      19.0477      362.8146    (     6)
   RGP                        3.    NON YR 1, CAI YR 2         229.3000      57.3250      11.0616      122.3625    (     4)

W3                            4.    GRADE FOUR                1255.5999      39.2375       9.0731       82.3205    (    32)
   RGP                        1.    CAI YR 1, CAI YR 2         941.6999      39.2375       9.5422       91.0538    (    24)
   RGP                        2.    NON YR 1, NON YR 2         313.9000      39.2375       8.0861       65.3855    (     8)

W3                            5.    GRADE FIVE                 972.2999      37.3961       9.7781       95.6108    (    26)
   RGP                        1.    CAI YR 1, CAI YR 2         403.2000      44.8000      10.0970      101.9500    (     9)
   RGP                        2.    NON YR 1, NON YR 2         569.0999      33.4765       7.1595       51.2582    (    17)

W3                            6.    GRADE SIX                  499.1999      41.6000       9.4303       88.9309    (    12)
   RGP                        1.    CAI YR 1, CAI YR 2         328.1000      41.0125       8.4038       70.6241    (     8)
   RGP                        2.    NON YR 1, NON YR 2         171.1000      42.7750      12.5908      158.5292    (     4)

W3                            7.    GRADE SEVEN                453.3999      32.3857      10.0601      101.2060    (    14)
   RGP                        1.    CAI YR 1, CAI YR 2         453.3999      32.3857      10.0601      101.2060    (    14)

W3                            8.    GRADE EIGHT                100.4000      25.1000       9.1840       84.3467    (     4)
   RGP                        2.    NON YR 1, NON YR 2         100.4000      25.1000       9.1840       84.3467    (     4)

W3                            9.    GRADE NINE                  20.4000      20.4000       0.0           0.0      (     1)
   RGP                        2.    NON YR 1, NON YR 2          20.4000      20.4000       0.0           0.0      (     1)

W3                           10.    GRADE TEN                  301.4000      37.6750      15.8091      249.9278    (     8)
   RGP                        1.    CAI YR 1, CAI YR 2          66.3000      33.1500      28.3550      804.0049    (     2)
   RGP                        2.    NON YR 1, NON YR 2         181.4000      45.3500      11.6177      134.9701    (     4)
   RGP                        4.    CAI YR 1, NON YR 2          53.7000      26.8500       5.4447       29.6450    (     2)

W3                           11.    GRADE ELEVEN               183.6000      36.7200      21.4095      458.3668    (     5)
   RGP                        4.    CAI YR 1, NON YR 2         183.6000      36.7200      21.4095      458.3668    (     5)

  TOTAL CASES =      244
MISSING CASES =      110 OR  45.1 PCT.
```

TABLE A25
Descriptive Statistics for HCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 1 - Year 2 Longitudinal File
GAIN 1

```
- - - - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   RG1        READING GAIN PRE YR1 TO POST YR1
    BROKEN DOWN BY   W3         GRADE LEVEL 81
                BY   RGP        READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                CODE      VALUE LABEL                    SUM           MEAN        STD DEV       VARIANCE          N

FOR ENTIRE POPULATION                                          965.5000        7.4845       12.5543       157.6114    (   129)


W3                         2.     GRADE TWO                     285.5000       16.7941       20.4479       418.1167    (    17)
   RGP                     2.     NON YR 1, NON YR 2            156.3000       13.0250       22.0843       487.7184    (    12)
   RGP                     3.     NON YR 1, CAI YR 2            129.2000       25.8400       13.6506       186.3378    (     5)

W3                         3.     GRADE THREE                   110.9000       10.0818        8.3775        70.1817    (    11)
   RGP                     1.     CAI YR 1, CAI YR 2             45.0000        9.0000        8.1397        66.2550    (     5)
   RGP                     2.     NON YR 1, NON YR 2             65.9000       10.9833        9.2311        85.2137    (     6)

W3                         4.     GRADE FOUR                    216.5000        6.7656       10.6893       114.2610    (    32)
   RGP                     1.     CAI YR 1, CAI YR 2            166.0000        6.9167       11.7812       138.7971    (    24)
   RGP                     2.     NON YR 1, NON YR 2             50.5000        6.3125        7.0465        49.6527    (     8)

W3                         5.     GRADE FIVE                    146.4000        5.8560       12.6325       159.5800    (    25)
   RGP                     1.     CAI YR 1, CAI YR 2             77.6000        9.7000       16.9187       286.2428    (     8)
   RGP                     2.     NON YR 1, NON YR 2             68.8000        4.0471       10.1624       103.2739    (    17)

W3                         6.     GRADE SIX                      55.0000        4.2308       10.1091       102.1940    (    13)
   RGP                     1.     CAI YR 1, CAI YR 2             32.8000        3.6444       10.3960       108.0778    (     9)
   RGP                     2.     NON YR 1, NON YR 2             22.2000        5.5500       10.8267       117.2166    (     4)

W3                         7.     GRADE SEVEN                    72.9000        5.2071        5.9018        34.8315    (    14)
   RGP                     1.     CAI YR 1, CAI YR 2             72.9000        5.2071        5.9018        34.8315    (    14)

W3                         8.     GRADE EIGHT                   -18.3000       -4.5750        4.1812        17.4825    (     4)
   RGP                     2.     NON YR 1, NON YR 2            -18.3000       -4.5750        4.1812        17.4825    (     4)

W3                         9.     GRADE NINE                     -5.7000       -5.7000        0.0            0.0       (     1)
   RGP                     2.     NON YR 1, NON YR 2             -5.7000       -5.7000        0.0            0.0       (     1)

W3                        10.     GRADE TEN                      67.6000        9.6571        6.2078        38.5362    (     7)
   RGP                     1.     CAI YR 1, CAI YR 2             14.6000        7.3000        1.9799         3.9200    (     2)
   RGP                     2.     NON YR 1, NON YR 2             27.1000        9.0333        9.3468        87.3624    (     3)
   RGP                     4.     CAI YR 1, NON YR 2             25.9000       12.9500        4.3134        18.6050    (     2)

W3                        11.     GRADE ELEVEN                   34.7000        6.9400       14.2919       204.2578    (     5)
   RGP                     4.     CAI YR 1, NON YR 2             34.7000        6.9400       14.2919       204.2578    (     5)

  TOTAL CASES =      244
MISSING CASES =      115 OR  47.1 PCT.
```

TABLE A26

Descriptive Statistics for NCB Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 1 - Year 2 Longitudinal File

GAIN 2

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   RG2        READING GAIN PRE YR1 TO PRE YR2
    BROKEN DOWN BY   W3         GRADE LEVEL 81
                BY   RGP        READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE     VALUE LABEL                     SUM          MEAN       STD DEV      VARIANCE       N

FOR ENTIRE POPULATION                                           514.4000       3.8677      14.2393      202.7578   (  133)


W3                          2.     GRADE TWO                    201.3000      11.8412      23.1474      535.8025   (   17)
   RGP                      2.     NON YR 1, NON YR 2           117.8000       9.8167      25.8279      667.0797   (   12)
   RGP                      3.     NON YR 1, CAI YR 2            83.5000      16.7000      16.3381      266.9348   (    5)

W3                          3.     GRADE THREE                  114.7000       7.6467      13.2442      175.4084   (   15)
   RGP                      1.     CAI YR 1, CAI YR 2            15.1000       3.0200      10.8451      117.6172   (    5)
   RGP                      2.     NON YR 1, NON YR 2            86.9000      14.4833      13.4072      179.7536   (    6)
   RGP                      3.     NON YR 1, CAI YR 2            12.7000       3.1750      14.3646      206.3425   (    4)

W3                          4.     GRADE FOUR                    24.4000       0.7625       9.9714       99.4295   (   32)
   RGP                      1.     CAI YR 1, CAI YR 2           -13.2000      -0.5739      10.2656      105.3829   (   23)
   RGP                      2.     NON YR 1, NON YR 2            37.6000       4.1778       8.7880       77.2294   (    9)

W3                          5.     GRADE FIVE                    74.3000       2.8577      15.3635      236.0376   (   26)
   RGP                      1.     CAI YR 1, CAI YR 2           -26.7000      -2.9667      21.2441      451.3123   (    9)
   RGP                      2.     NON YR 1, NON YR 2           101.0000       5.9412      10.6756      113.9667   (   17)

W3                          6.     GRADE SIX                     70.9000       5.9083      13.0353      169.9190   (   12)
   RGP                      1.     CAI YR 1, CAI YR 2            32.8000       4.1000      10.8818      118.4143   (    8)
   RGP                      2.     NON YR 1, NON YR 2            38.1000       9.5250      17.9046      320.5756   (    4)

W3                          7.     GRADE SEVEN                   29.9000       2.1357       7.6053       57.8409   (   14)
   RGP                      1.     CAI YR 1, CAI YR 2            29.9000       2.1357       7.6053       57.8409   (   14)

W3                          8.     GRADE EIGHT                   -4.2000      -1.0500      13.7469      188.9766   (    4)
   RGP                      2.     NON YR 1, NON YR 2            -4.2000      -1.0500      13.7469      188.9766   (    4)

W3                          9.     GRADE NINE                     0.0          0.0          0.0           0.0      (    1)
   RGP                      2.     NON YR 1, NON YR 2             0.0          0.0          0.0           0.0      (    1)

W3                         10.     GRADE TEN                     -7.8000      -1.1143      12.0819      145.9713   (    7)
   RGP                      1.     CAI YR 1, CAI YR 2           -10.3000      -5.1500      20.1525      406.1246   (    2)
   RGP                      2.     NON YR 1, NON YR 2           -11.0000      -3.6667      11.8509      140.4433   (    3)
   RGP                      4.     CAI YR 1, NON YR 2            13.5000       6.7500       3.6062       13.0050   (    2)

W3                         11.     GRADE ELEVEN                  10.9000       2.1800      12.9101      166.6719   (    5)
   RGP                      4.     CAI YR 1, NON YR 2            10.9000       2.1800      12.9101      166.6719   (    5)

   TOTAL CASES =      244
 MISSING CASES =      111 OR  45.5 PCT.
```

TABLE A27

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 1 - Year 2 Longitudinal File

GAIN 3

```
- - - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE    RG3        READING GAIN PRE YR1 TO POST YR2
    BROKEN DOWN BY    R3         GRADE LEVEL 81
                BY    RGP        READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                CODE    VALUE LABEL                  SUM         MEAN        STD DEV     VARIANCE          N

FOR ENTIRE POPULATION                                      949.7999      7.1955      15.9365     253.9722    (   132)

R3                       2.     GRADE TWO                  217.2999     12.7823      30.7739     947.0315    (    17)
   RGP                   2.     NON YR 1, NON YR 2         136.9000     11.4083      35.6558    1271.3354    (    12)
   RGP                   3.     NON YR 1, CAI YR 2          80.4000     16.0800      16.5135     272.6967    (     5)

R3                       3.     GRADE THREE                149.5000      9.9667      19.3696     375.1795    (    15)
   RGP                   1.     CAI YR 1, CAI YR 2          37.1000      7.4200      15.6108     243.6971    (     5)
   RGP                   2.     NON YR 1, NON YR 2           9.3000      1.5500      19.9054     396.2230    (     6)
   RGP                   3.     NON YR 1, CAI YR 2         103.1000     25.7750      16.7265     279.6425    (     4)

R3                       4.     GRADE FOUR                 184.9000      5.9645      11.3018     127.7310    (    31)
   RGP                   1.     CAI YR 1, CAI YR 2         141.8000      6.1652      10.9004     116.8187    (    23)
   RGP                   2.     NON YR 1, NON YR 2          43.1000      5.3875      13.1710     173.4755    (     8)

R3                       5.     GRADE FIVE                 195.4000      7.5154       9.4681      89.6453    (    26)
   RGP                   1.     CAI YR 1, CAI YR 2         119.0000     13.2222      10.8333     117.3594    (     9)
   RGP                   2.     NON YR 1, NON YR 2          76.4000      4.4941       7.3057      53.3731    (    17)

R3                       6.     GRADE SIX                  132.6000     11.0500      14.7568     217.7644    (    12)
   RGP                   1.     CAI YR 1, CAI YR 2          86.2000     10.7750      13.5698     184.1392    (     8)
   RGP                   2.     NON YR 1, NON YR 2          46.4000     11.6000      19.1887     368.2065    (     4)

R3                       7.     GRADE SEVEN                 12.9000      0.9214       9.6545      93.2096    (    14)
   RGP                   1.     CAI YR 1, CAI YR 2          12.9000      0.9214       9.6545      93.2096    (    14)

R3                       8.     GRADE EIGHT                -11.3000     -2.8250      12.0062     144.1492    (     4)
   RGP                   2.     NON YR 1, NON YR 2         -11.3000     -2.8250      12.0062     144.1492    (     4)

R3                       9.     GRADE NINE                  -2.6000     -2.6000       0.0           0.0      (     1)
   RGP                   2.     NON YR 1, NON YR 2          -2.6000     -2.6000       0.0           0.0      (     1)

R3                      10.     GRADE TEN                   59.2000      8.4571       9.2040      84.7128    (     7)
   RGP                   1.     CAI YR 1, CAI YR 2           8.2000      4.1000      16.1220     259.9199    (     2)
   RGP                   2.     NON YR 1, NON YR 2          33.4000     11.1333       9.6500      93.1233    (     3)
   RGP                   4.     CAI YR 1, NON YR 2          17.6000      8.8000       1.5556       2.4200    (     2)

R3                      11.     GRADE ELEVEN                11.9000      2.3800       6.9805      48.7270    (     5)
   RGP                   4.     CAI YR 1, NON YR 2          11.9000      2.3800       6.9805      48.7270    (     5)

  TOTAL CASES =      244
MISSING CASES =      112 OR  45.9 PCT.
```

TABLE A28
Descriptive Statistics for NCE Pretest, Post Test
and Gain Scores by Treatment and Grade Level for
Reading in the Year 1 - Year 2 Longitudinal File
GAIN 4

```
- - - - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   RG4        READING GAIN OVER SUMMER
    BROKEN DOWN BY   W3         GRADE LEVEL 81
                BY   RGP        READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                   CODE      VALUE LABEL                        SUM          MEAN         STD DEV       VARIANCE        N

FOR ENTIRE POPULATION                                              -416.5000       -3.2795        11.6298       135.2516   (   127)


W3                           2.      GRADE TWO                      -84.2000       -4.9529        14.9884       224.6527   (    17)
   RGP                       2.      NON YR 1, NON YR 2             -38.5000       -3.2083        16.9803       288.3318   (    12)
   RGP                       3.      NON YR 1, CAI YR 2             -45.7000       -9.1400         8.6402        74.6530   (     5)

W3                           3.      GRADE THREE                     -8.9000       -0.8091        11.7184       137.3209   (    11)
   RGP                       1.      CAI YR 1, CAI YR 2             -29.9000       -5.9800         5.2179        27.2270   (     5)
   RGP                       2.      NON YR 1, NON YR 2              21.0000        3.5000        14.2773       203.6399   (     6)

W3                           4.      GRADE FOUR                    -183.8000       -5.9290        10.2529       105.1228   (    31)
   RGP                       1.      CAI YR 1, CAI YR 2            -174.4000       -7.5826         9.9186        98.3779   (    23)
   RGP                       2.      NON YR 1, NON YR 2              -9.4000       -1.1750        10.3211       106.5249   (     8)

W3                           5.      GRADE FIVE                     -40.5000       -1.6200        12.3461       152.4257   (    25)
   RGP                       1.      CAI YR 1, CAI YR 2             -72.7000       -9.0875        12.7183       161.7554   (     8)
   RGP                       2.      NON YR 1, NON YR 2              32.2000        1.8941        10.8106       116.8680   (    17)

W3                           6.      GRADE SIX                       23.3000        1.9417         6.2376        38.9081   (    12)
   RGP                       1.      CAI YR 1, CAI YR 2            , 7.4000         0.9250         5.5350        30.6364   (     8)
   RGP                       2.      NON YR 1, NON YR 2              15.9000        3.9750         7.9315        62.9091   (     4)

W3                           7.      GRADE SEVEN                    -43.0000       -3.0714         7.8924        62.2899   (    14)
   RGP                       1.      CAI YR 1, CAI YR 2             -43.0000       -3.0714         7.8924        62.2899   (    14)

W3                           8.      GRADE EIGHT                     14.1000        3.5250        15.7699       248.6890   (     4)
   RGP                       2.      NON YR 1, NON YR 2              14.1000        3.5250        15.7699       248.6890   (     4)

W3                           9.      GRADE NINE                       5.7000        5.7000         0.0            0.0      (     1)
   RGP                       2.      NON YR 1, NON YR 2               5.7000        5.7000         0.0            0.0      (     1)

W3                          10.      GRADE TEN                      -75.4000      -10.7714        15.3029       234.1790   (     7)
   RGP                       1.      CAI YR 1, CAI YR 2             -24.9000      -12.4500        22.1324       489.8446   (     2)
   RGP                       2.      NON YR 1, NON YR 2             -38.1000      -12.7000        20.6899       428.0760   (     3)
   RGP                       4.      CAI YR 1, NON YR 2             -12.4000       -6.2000         0.7071         0.5000   (     2)

W3                          11.      GRADE ELEVEN                   -23.8000       -4.7600        10.8928       118.6530   (     5)
   RGP                       4.      CAI YR 1, NON YR 2             -23.8000       -4.7600        10.8928       118.6530   (     5)

  TOTAL CASES =      244
MISSING CASES =      117 OR  48.0 PCT.
```

TABLE A29
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 1 - Year 2 Longitudinal File
GAIN 5

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   RG5        READING GAIN PRE YR2 TO POST YR2
     BROKEN DOWN BY  W3         GRADE LEVEL 81
                 BY  RGP        READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                    CODE     VALUE LABEL                    SUM          MEAN        STD DEV      VARIANCE        N

FOR ENTIRE POPULATION                                            446.2999       3.3556      13.8273      191.1943    (   133)

W3                           2.      GRADE TWO                    16.0000       0.9412      17.6346      310.9788    (    17)
  RGP                        2.      NON YR 1, NON YR 2           19.1000       1.5917      20.7255      429.5462    (    12)
  RGP                        3.      NON YR 1, CAI YR 2           -3.1000      -0.6200       7.6385       58.3470    (     5)

W3                           3.      GRADE THREE                  34.8000       2.3200      23.1118      534.1544    (    15)
  RGP                        1.      CAI YR 1, CAI YR 2           22.0000       4.4000       8.4027       70.6050    (     5)
  RGP                        2.      NON YR 1, NON YR 2          -77.6000     -12.9333      27.3461      747.8104    (     6)
  RGP                        3.      NON YR 1, CAI YR 2           90.4000      22.6000      11.4595      131.3200    (     4)

W3                           4.      GRADE FOUR                  145.8000       4.7032      10.5789      111.9123    (    31)
  RGP                        1.      CAI YR 1, CAI YR 2          143.8000       6.2522      10.9554      120.0199    (    23)
  RGP                        2.      NON YR 1, NON YR 2            2.0000       0.2500       8.4777       71.8714    (     6)

W3                           5.      GRADE FIVE                  121.0999       4.6577      13.8110      190.7433    (    26)
  RGP                        1.      CAI YR 1, CAI YR 2          145.7000      16.1889      14.4364      208.4110    (     9)
  RGP                        2.      NON YR 1, NON YR 2          -24.6000      -1.4471       8.9129       79.4389    (    17)

W3                           6.      GRADE SIX                    61.7000       5.1417       8.6885       75.4899    (    12)
  RGP                        1.      CAI YR 1, CAI YR 2           53.4000       6.6750      10.3503      107.1279    (     8)
  RGP                        2.      NON YR 1, NON YR 2            8.3000       2.0750       2.8324        8.0225    (     4)

W3                           7.      GRADE SEVEN                 -17.0000      -1.2143       9.5287       90.7967    (    14)
  RGP                        1.      CAI YR 1, CAI YR 2          -17.0000      -1.2143       9.5287       90.7967    (    14)

W3                           8.      GRADE EIGHT                  -7.1000      -1.7750       5.4310       29.4958    (     4)
  RGP                        2.      NON YR 1, NON YR 2           -7.1000      -1.7750       5.4310       29.4958    (     4)

W3                           9.      GRADE NINE                   -2.6000      -2.6000       0.0           0.0        (     1)
  RGP                        2.      NON YR 1, NON YR 2           -2.6000      -2.6000       0.0           0.0        (     1)

W3                          10.      GRADE TEN                    92.6000      11.5750       8.6382       74.6191    (     8)
  RGP                        1.      CAI YR 1, CAI YR 2           18.5000       9.2500       4.0305       16.2449    (     2)
  RGP                        2.      NON YR 1, NON YR 2           70.0000      17.5000       6.9943       48.9199    (     4)
  RGP                        4.      CAI YR 1, NON YR 2            4.1000       2.0500       5.1619       26.6450    (     2)

W3                          11.      GRADE ELEVEN                  1.0000       0.2000      13.7755      189.7650    (     5)
  RGP                        4.      CAI YR 1, NON YR 2            1.0000       0.2000      13.7755      189.7650    (     5)

   TOTAL CASES =      244
 MISSING CASES =      111 OR  45.5 PCT.
```

TABLE A30
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Mathematics in the Year 1 - Year 2 Longitudinal File
MATHEMATICS PRETEST YEAR 1

```
- - - - - - - - - - - - - - - - - -   D E S C R I P T I O N   O F   S U B P O P U L A T I O N S   - - - - - - - - - - - - - - - - -
CRITERION VARIABLE    V35          MATH PRETEST NCE SCORE 80
    BROKEN DOWN BY    W3           GRADE LEVEL 81
                BY    MGP          MATHEMATICS TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                     CODE     VALUE LABEL                     SUM          MEAN        STD DEV      VARIANCE        N

FOR ENTIRE POPULATION                                             2961.9995       37.0250      13.2886      176.5869   (    80)


W3                            1.      GRADE ONE                     96.1000       24.0250      18.5241      343.1424   (     4)
   MGP                        2.      NON YR 1, NON YR 2            96.1000       24.0250      18.5241      343.1424   (     4)

W3                            2.      GRADE TWO                    488.5999       37.5846      15.6685      245.5031   (    13)
   MGP                        1.      CAI YR 1, CAI YR 2            99.0000       33.0000      22.4386      503.4901   (     3)
   MGP                        2.      NON YR 1, NON YR 2           266.1000       38.0143      12.4807      155.7681   (     7)
   MGP                        4.      CAI YR 1, NON YR 2           123.5000       41.1667      21.2321      450.8032   (     3)

W3                            3.      GRADE THREE                  349.6999       29.1417      16.7280      279.8244   (    12)
   MGP                        1.      CAI YR 1, CAI YR 2            13.1000       13.1000       0.0           0.0     (     1)
   MGP                        2.      NON YR 1, NON YR 2           292.9999       29.3000      17.0341      290.1599   (    10)
   MGP                        3.      NON YR 1, CAI YR 2            43.6000       43.6000       0.0           0.0     (     1)

W3                            4.      GRADE FOUR                   933.6998       35.9115      10.7852      116.3195   (    26)
   MGP                        1.      CAI YR 1, CAI YR 2           339.5999       33.9600      15.0517      226.5538   (    10)
   MGP                        2.      NON YR 1, NON YR 2           500.6999       35.7643       6.4421       41.5009   (    14)
   MGP                        3.      NON YR 1, CAI YR 2            93.4000       46.7000       7.6368       58.3200   (     2)

W3                            5.      GRADE FIVE                   608.6999       43.4786       6.0729       36.8803   (    14)
   MGP                        1.      CAI YR 1, CAI YR 2           124.2000       41.4000       6.6910       44.7700   (     3)
   MGP                        2.      NON YR 1, NON YR 2           445.4999       44.5500       6.1950       38.3783   (    10)
   MGP                        3.      NON YR 1, CAI YR 2            39.0000       39.0000       0.0           0.0     (     1)

W3                            6.      GRADE SIX                    485.2000       44.1091       9.5720       91.6229   (    11)
   MGP                        1.      CAI YR 1, CAI YR 2           402.6000       44.7333       9.8832       97.6775   (     9)
   MGP                        2.      NON YR 1, NON YR 2            82.6000       41.3000      10.7480      115.5200   (     2)

  TOTAL CASES =      254
MISSING CASES =      174 OR  68.5 PCT.
```

TABLE A31

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Mathematics in the Year 1 - Year 2 Longitudinal File

MATHEMATICS POST TEST YEAR 1

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   V37       MATH POSTTEST NCE SCORE 80
    BROKEN DOWN BY   K3        GRADE LEVEL 81
                BY   MGP       MATHEMATICS TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE     VALUE LABEL                    SUM          MEAN       STD DEV      VARIANCE          N

FOR ENTIRE POPULATION                                          3492.2996      49.1873      13.7738      189.7186    (    71)

K3                         1.      GRADE ONE                    217.0000      54.2500      15.0755      227.2700    (     4)
   MGP                     2.      NON YR 1, NON YR 2           217.0000      54.2500      15.0755      227.2700    (     4)

K3                         2.      GRADE TWO                    636.7999      48.9846      16.7680      281.1647    (    13)
   MGP                     1.      CAI YR 1, CAI YR 2           136.7000      45.5667      11.3738      129.3633    (     3)
   MGP                     2.      NON YR 1, NON YR 2           349.7000      49.9571      15.8652      251.7081    (     7)
   MGP                     4.      CAI YR 1, NON YR 2           150.4000      50.1333      27.9230      779.6932    (     3)

K3                         3.      GRADE THREE                  574.1999      47.8500      14.0837      198.3500    (    12)
   MGP                     1.      CAI YR 1, CAI YR 2            29.1000      29.1000       0.0           0.0      (     1)
   MGP                     2.      NON YR 1, NON YR 2           496.2000      49.6200      14.1337      199.7618    (    10)
   MGP                     3.      NON YR 1, CAI YR 2            48.9000      48.9000       0.0           0.0      (     1)

K3                         4.      GRADE FOUR                   895.1999      52.6588      17.5567      308.2389    (    17)
   MGP                     1.      CAI YR 1, CAI YR 2           521.5999      52.1600      21.8510      477.4672    (    10)
   MGP                     2.      NON YR 1, NON YR 2           264.0000      52.8000      12.4272      154.4350    (     5)
   MGP                     3.      NON YR 1, CAI YR 2           109.6000      54.8000       2.2627        5.1200    (     2)

K3                         5.      GRADE FIVE                   612.1999      43.7286       8.1875       67.0345    (    14)
   MGP                     1.      CAI YR 1, CAI YR 2           120.8000      40.2667      11.3161      128.0532    (     3)
   MGP                     2.      NON YR 1, NON YR 2           452.3999      45.2400       7.7041       59.3538    (    10)
   MGP                     3.      NON YR 1, CAI YR 2            39.0000      39.0000       0.0           0.0      (     1)

K3                         6.      GRADE SIX                    556.8999      50.6273       6.8558       47.0022    (    11)
   MGP                     1.      CAI YR 1, CAI YR 2           457.8999      50.8778       7.4123       54.9420    (     9)
   MGP                     2.      NON YR 1, NON YR 2            99.0000      49.5000       5.2326       27.3801    (     2)

  TOTAL CASES =       254
MISSING CASES =       183 OR  72.0 PCT.
```

TABLE A32

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Mathematics in the Year 1 - Year 2 Longitudinal File

MATHEMATICS PRETEST YEAR 2

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   W35       MATH PRETEST NCE SCORE 81
    BROKEN DOWN BY   W3        GRADE LEVEL 81
                BY   MGP       MATHEMATICS TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                    CODE     VALUE LABEL                      SUM          MEAN       STD DEV      VARIANCE       N

FOR ENTIRE POPULATION                                           3270.1995       42.4701       12.3796      153.2534   (   77)


W3                           1.      GRADE ONE                   128.2000       32.0500       10.7856      116.3300   (    4)
   MGP                       2.      NON YR 1, NON YR 2          128.2000       32.0500       10.7856      116.3300   (    4)

W3                           2.      GRADE TWO                   487.0999       40.5917       10.8331      117.3554   (   12)
   MGP                       1.      CAI YR 1, CAI YR 2          114.4000       38.1333        9.4085       88.5333   (    3)
   MGP                       2.      NON YR 1, NON YR 2          262.9000       43.8167       12.1261      147.0417   (    6)
   MGP                       4.      CAI YR 1, NON YR 2          109.8000       36.6000       11.1369      124.0300   (    3)

W3                           3.      GRADE THREE                 595.9999       49.6667        7.6512       58.5406   (   12)
   MGP                       1.      CAI YR 1, CAI YR 2           62.3000       62.3000        0.0           0.0      (    1)
   MGP                       2.      NON YR 1, NON YR 2          472.6999       47.2700        5.7587       33.1623   (   10)
   MGP                       3.      NON YR 1, CAI YR 2           61.0000       61.0000        0.0           0.0      (    1)

W3                           4.      GRADE FOUR                  966.0998       38.6440       12.7628      162.8901   (   25)
   MGP                       1.      CAI YR 1, CAI YR 2          388.0999       38.8100       12.6395      159.7566   (   10)
   MGP                       2.      NON YR 1, NON YR 2          548.8999       39.2071       13.5165      182.7500   (   14)
   MGP                       3.      NON YR 1, CAI YR 2           29.1000       29.1000        0.0           0.0      (    1)

W3                           5.      GRADE FIVE                  633.3999       48.7231       15.3870      236.7585   (   13)
   MGP                       1.      CAI YR 1, CAI YR 2          149.8000       49.9333       18.0056      324.2032   (    3)
   MGP                       2.      NON YR 1, NON YR 2          483.6000       48.3600       15.5884      242.9981   (   10)

W3                           6.      GRADE SIX                   459.3999       41.7636        7.9690       63.5045   (   11)
   MGP                       1.      CAI YR 1, CAI YR 2          388.5999       43.1778        7.8412       61.4845   (    9)
   MGP                       2.      NON YR 1, NON YR 2           70.8000       35.4000        6.6468       44.1799   (    2)

  TOTAL CASES =      254
MISSING CASES =      177 OR  69.7 PCT.
```

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TABLE A33
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Mathematics in the Year 1 - Year 2 Longitudinal File
MATHEMATICS POST TEST YEAR 2

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE    M37        MATH POSTTEST NCE SCORE 81
    BROKEN DOWN BY    M3         GRADE LEVEL 81
                BY    MGP        MATHEMATICS TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                    CODE     VALUE LABEL                       SUM          MEAN        STD DEV       VARIANCE        N

FOR ENTIRE POPULATION                                             3537.3996       47.8027       11.4861       131.9301   (   74)


M3                           1.      GRADE ONE                     119.7000       39.9000       15.7617       248.4300   (    3)
   MGP                       2.      NON YR 1, NON YR 2            119.7000       39.9000       15.7617       248.4300   (    3)

M3                           2.      GRADE TWO                     683.3000       52.5615       16.0865       258.7759   (   13)
   MGP                       1.      CAI YR 1, CAI YR 2            128.9000       42.9667       12.7442       162.4134   (    3)
   MGP                       2.      NON YR 1, NON YR 2            388.3000       55.4714       17.6233       310.5790   (    7)
   MGP                       4.      CAI YR 1, NON YR 2            166.1000       55.3667       16.7025       278.9733   (    3)

M3                           3.      GRADE THREE                   553.7999       50.3454        9.5762        91.7027   (   11)
   MGP                       1.      CAI YR 1, CAI YR 2             45.8000       45.8000        0.0             0.0     (    1)
   MGP                       2.      NON YR 1, NON YR 2            442.3999       49.1555        9.0203        81.3653   (    9)
   MGP                       3.      NON YR 1, CAI YR 2             65.6000       65.6000        0.0             0.0     (    1)

M3                           4.      GRADE FOUR                   1029.2999       46.7864       10.4093       108.3545   (   22)
   MGP                       1.      CAI YR 1, CAI YR 2            363.7000       51.9571       11.2973       127.6295   (    7)
   MGP                       2.      NON YR 1, NON YR 2            605.6999       43.2643        8.6686        75.1460   (   14)
   MGP                       3.      NON YR 1, CAI YR 2             59.9000       59.9000        0.0             0.0     (    1)

M3                           5.      GRADE FIVE                    666.9999       47.6429       10.6188       112.7596   (   14)
   MGP                       1.      CAI YR 1, CAI YR 2            144.1000       48.0333        9.9284        98.5734   (    3)
   MGP                       2.      NON YR 1, NON YR 2            485.2000       48.5200       11.3613       129.0796   (   10)
   MGP                       3.      NON YR 1, CAI YR 2             37.7000       37.7000        0.0             0.0     (    1)

M3                           6.      GRADE SIX                     484.2999       44.0273        7.9851        63.7622   (   11)
   MGP                       1.      CAI YR 1, CAI YR 2            396.5999       44.0667        8.3806        70.2375   (    9)
   MGP                       2.      NON YR 1, NON YR 2             87.7000       43.8500        8.6974        75.6450   (    2)

 TOTAL CASES =       254
MISSING CASES =      180 OR  70.9 PCT.
```

TABLE A34
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Mathematics in the Year 1 - Year 2 Longitudinal File
GAIN 1

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   MG1      MATH GAIN PRE YR1 TO POST YR1
    BROKEN DOWN BY   W3       GRADE LEVEL 81
                BY   MGP      MATHEMATICS TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                    CODE    VALUE LABEL                   SUM          MEAN       STD DEV      VARIANCE        N

FOR ENTIRE POPULATION                                         859.1000       12.1000      15.4927      240.0234    (   71)

W3                           1.     GRADE ONE                 120.9000       30.2250       6.8344       46.7092    (    4)
   MGP                       2.     NON YR 1, NON YR 2        120.9000       30.2250       6.8344       46.7092    (    4)

W3                           2.     GRADE TWO                 148.2000       11.4000      16.9082      285.8883    (   13)
   MGP                       1.     CAI YR 1, CAI YR 2         37.7000       12.5667      28.8072      829.8533    (    3)
   MGP                       2.     NON YR 1, NON YR 2         83.6000       11.9429      14.6385      214.2861    (    7)
   MGP                       4.     CAI YR 1, NON YR 2         26.9000        8.9667      15.1876      230.6634    (    3)

W3                           3.     GRADE THREE               224.5000       18.7083      13.2084      174.4626    (   12)
   MGP                       1.     CAI YR 1, CAI YR 2         16.0000       16.0000       0.0           0.0       (    1)
   MGP                       2.     NON YR 1, NON YR 2        203.2000       20.3200      13.7679      189.5551    (   10)
   MGP                       3.     NON YR 1, CAI YR 2          5.3000        5.3000       0.0           0.0       (    1)

W3                           4.     GRADE FOUR                290.3000       17.0765      18.0960      327.4657    (   17)
   MGP                       1.     CAI YR 1, CAI YR 2        182.0000       18.2000      22.8426      521.7846    (   10)
   MGP                       2.     NON YR 1, NON YR 2         92.1000       18.4200       8.1023       65.6471    (    5)
   MGP                       3.     NON YR 1, CAI YR 2         16.2000        8.1000       9.8995       98.0000    (    2)

W3                           5.     GRADE FIVE                  3.5000        0.2500       6.9801       48.7211    (   14)
   MGP                       1.     CAI YR 1, CAI YR 2         -3.4000       -1.1333       4.6801       21.9033    (    3)
   MGP                       2.     NON YR 1, NON YR 2          6.9000        0.6900       8.0404       64.6476    (   10)
   MGP                       3.     NON YR 1, CAI YR 2          0.0           0.0          0.0           0.0       (    1)

W3                           6.     GRADE SIX                  71.7000        6.5182       9.2996       86.4817    (   11)
   MGP                       1.     CAI YR 1, CAI YR 2         55.3000        6.1444      10.1703      103.4353    (    9)
   MGP                       2.     NON YR 1, NON YR 2         16.4000        8.2000       5.5154       30.4199    (    2)

  TOTAL CASES =      254
MISSING CASES =      183 OR  72.0 PCT.
```

TABLE A35

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Mathematics in the Year 1 - Year 2 Longitudinal File

GAIN 2

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - -
CRITERION VARIABLE   MG2        MATH GAIN PRE YR1 TO PRE YR2
   BROKEN DOWN BY    W3         GRADE LEVEL 81
                BY   MGP        MATHEMATICS TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                    CODE     VALUE LABEL                       SUM           MEAN          STD DEV       VARIANCE          N

FOR ENTIRE POPULATION                                               426.5000        5.5390        15.7498       248.0574     (    77)


W3                           1.      GRADE ONE                        32.1000        8.0250        24.6363       606.9492    (     4)
   MGP                       2.      NON YR 1, NON YR 2               32.1000        8.0250        24.6363       606.9492    (     4)

W3                           2.      GRADE TWO                        25.7000        2.1417        16.4715       271.3117    (    12)
   MGP                       1.      CAI YR 1, CAI YR 2               15.4000        5.1333        18.3211       335.6634    (     3)
   MGP                       2.      NON YR 1, NON YR 2               24.0000        4.0000         6.9085        47.7260    (     6)
   MGP                       4.      CAI YR 1, NON YR 2              -13.7000       -4.5667        30.7562       945.9430    (     3)

W3                           3.      GRADE THREE                     246.2999       20.5250        18.0904       327.2637    (    12)
   MGP                       1.      CAI YR 1, CAI YR 2               49.2000       49.2000         0.0            0.0       (     1)
   MGP                       2.      NON YR 1, NON YR 2              179.7000       17.9700        17.3288       300.2889    (    10)
   MGP                       3.      NON YR 1, CAI YR 2               17.4000       17.4000         0.0            0.0       (     1)

W3                           4.      GRADE FOUR                       84.5000        3.3800        11.7140       137.2167    (    25)
   MGP                       1.      CAI YR 1, CAI YR 2               46.5000        4.6500         9.3391        87.2184    (    10)
   MGP                       2.      NON YR 1, NON YR 2               48.2000        3.4429        13.1376       172.6027    (    14)
   MGP                       3.      NON YR 1, CAI YR 2              -12.2000      -12.2000         0.0            0.0       (     1)

W3                           5.      GRADE FIVE                       63.7000        4.9000        14.2055       201.7950    (    13)
   MGP                       1.      CAI YR 1, CAI YR 2               25.6000        8.5333        13.0040       169.1034    (     3)
   MGP                       2.      NON YR 1, NON YR 2               38.1000        3.8100        15.0253       225.7610    (    10)

W3                           6.      GRADE SIX                       -25.8000       -2.3455        10.3375       106.8607    (    11)
   MGP                       1.      CAI YR 1, CAI YR 2              -14.0000       -1.5556        11.2966       127.6127    (     9)
   MGP                       2.      NON YR 1, NON YR 2              -11.8000       -5.9000         4.1012        16.8200    (     2)

  TOTAL CASES =      254
MISSING CASES =      177 OR   69.7 PCT.
```

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                                        TABLE A36
                     Descriptive Statistics for NCE Pretest, Post Test
                      and Gain Scores by Treatment and Grade Level for
                    Mathematics in the Year 1 - Year 2 Longitudinal File
                                          GAIN 3
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   MG3        MATH GAIN PRE YR1 TO POST YR2
   BROKEN DOWN BY    G3         GRADE LEVEL 81
               BY    MGP        MATHEMATICS TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                   CODE     VALUE LABEL                    SUM          MEAN        STD DEV       VARIANCE         N

FOR ENTIRE POPULATION                                           730.0000       9.8649       14.9502       223.5100   (     74)


G3                           1.     GRADE ONE                    24.6000       8.2000       25.9189       671.7902   (      3)
   MGP                       2.     NCN YR 1, NCN YR 2           24.6000       8.2000       25.9189       671.7902   (      3)

G3                           2.     GRADE TWO                   194.7000      14.9769       19.6358       385.5635   (     13)
   MGP                       1.     CAI YR 1, CAI YR 2           29.9000       9.9667       31.0919       966.7034   (      3)
   MGP                       2.     NCN YR 1, NCN YR 2          122.2000      17.4571       13.8672       192.2995   (      7)
   MGP                       4.     CAI YR 1, NCN YR 2           42.6000      14.2000       26.6400       709.6897   (      3)

G3                           3.     GRADE THREE                 231.3000      21.0273       15.2245       231.7862   (     11)
   MGP                       1.     CAI YR 1, CAI YR 2           32.7000      32.7000        0.0            0.0       (      1)
   MGP                       2.     NCN YR 1, NCN YR 2          176.6000      19.6222       16.4426       270.3595   (      9)
   MGP                       3.     NCN YR 1, CAI YR 2           22.0000      22.0000        0.0            0.0       (      1)

G3                           4.     GRADE FOUR                  222.0000      10.0909       10.7896       116.4161   (     22)
   MGP                       1.     CAI YR 1, CAI YR 2          109.2000      15.6000       11.8564       140.5734   (      7)
   MGP                       2.     NCN YR 1, NCN YR 2          105.0000       7.5000        9.9600        99.2015   (     14)
   MGP                       3.     NCN YR 1, CAI YR 2            7.8000       7.8000        0.0            0.0       (      1)

G3                           5.     GRADE FIVE                   58.3000       4.1643        8.7613        76.7590   (     14)
   MGP                       1.     CAI YR 1, CAI YR 2           19.9000       6.6333       11.9356       142.4634   (      3)
   MGP                       2.     NCN YR 1, NCN YR 2           39.7000       3.9700        8.5917        73.8179   (     10)
   MGP                       3.     NCN YR 1, CAI YR 2           -1.3000      -1.3000        0.0            0.0       (      1)

G3                           6.     GRADE SIX                    -0.9000      -0.0818       11.4999       132.2475   (     11)
   MGP                       1.     CAI YR 1, CAI YR 2           -6.0000      -0.6667       12.7541       162.6674   (      9)
   MGP                       2.     NCN YR 1, NCN YR 2            5.1000       2.5500        2.0506         4.2050   (      2)

  TOTAL CASES =      254
MISSING CASES =      180 OR  70.9 PCT.
```

TABLE A37
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Mathematics in the Year 1 - Year 2 Longitudinal File
GAIN 4

```
- - - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - - -
CRITERION VARIABLE    MG4        MATH GAIN OVER SUMMER
   BROKEN DOWN BY     M3         GRADE LEVEL 81
               BY     MGP        MATHEMATICS TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE     VALUE LABEL                         SUM           MEAN        STD DEV      VARIANCE          N

FOR ENTIRE POPULATION                                             -447.8000        -6.5853       18.5300      343.3613    (    68)


M3                          1.     GRADE ONE                       -88.8000       -22.2000       19.8163      392.6666    (     4)
  MGP                       2.     NON YR 1, NON YR 2              -88.8000       -22.2000       19.8163      392.6666    (     4)

M3                          2.     GRADE TWO                      -112.0000        -9.3333       20.9212      437.6969    (    12)
  MGP                       1.     CAI YR 1, CAI YR 2              -22.3000        -7.4333       10.5510      111.3233    (     3)
  MGP                       2.     NON YR 1, NON YR 2              -49.1000        -8.1833       17.1775      295.0650    (     6)
  MGP                       4.     CAI YR 1, NON YR 2              -40.6000       -13.5333       39.0193     1522.5633    (     3)

M3                          3.     GRADE THREE                      21.8000         1.8167       18.5652      344.6652    (    12)
  MGP                       1.     CAI YR 1, CAI YR 2               33.2000        33.2000        0.0           0.0      (     1)
  MGP                       2.     NON YR 1, NON YR 2              -23.5000        -2.3500       16.7566      280.7820    (    10)
  MGP                       3.     NON YR 1, CAI YR 2               12.1000        12.1000        0.0           0.0      (     1)

M3                          4.     GRADE FOUR                     -231.5000       -14.4687       19.9673      398.6811    (    16)
  MGP                       1.     CAI YR 1, CAI YR 2             -133.5000       -13.3500       22.7716      518.5452    (    10)
  MGP                       2.     NON YR 1, NON YR 2              -70.7000       -14.1400       16.8494      283.9031    (     5)
  MGP                       3.     NON YR 1, CAI YR 2              -27.3000       -27.3000        0.0           0.0      (     1)

M3                          5.     GRADE FIVE                       60.2000         4.6308       13.0069      173.7973    (    13)
  MGP                       1.     CAI YR 1, CAI YR 2               29.0000         9.6667       11.5754      133.9933    (     3)
  MGP                       2.     NON YR 1, NON YR 2               31.2000         3.1200       13.6727      186.9439    (    10)

M3                          6.     GRADE SIX                       -97.5000        -8.8636        7.6968       59.1966    (    11)
  MGP                       1.     CAI YR 1, CAI YR 2              -69.3000        -7.7000        8.0813       65.3075    (     9)
  MGP                       2.     NON YR 1, NON YR 2              -28.2000       -14.1000        1.4142        2.0000    (     2)

  TOTAL CASES =      254
MISSING CASES =      186 OR  73.2 PCT.
```

TABLE A38
Descriptive Statistics for NCE Pretest, Post Test
and Gain Scores by Treatment and Grade Level for
Mathematics in the Year 1 - Year 2 Longitudinal File
GAIN 5

```
- - - - - - - - - - - - - - - - -   D E S C R I P T I O N   O F   S U B P O P U L A T I O N S   - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   MG5       MATH GAIN PRE YR2 TO POST YR2
    BROKEN DOWN BY   K3        GRADE LEVEL 81
                BY   MGP       MATHEMATICS TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                   CODE     VALUE LABEL                    SUM          MEAN        STD DEV      VARIANCE          N

FOR ENTIRE POPULATION                                         349.2001        4.9183       12.2860      150.9456    (    71)

K3                           1.     GRADE ONE                  31.6000       10.5333       11.3500      128.8232    (     3)
   MGP                       2.     NON YR 1, NON YR 2         31.6000       10.5333       11.3500      128.8232    (     3)

K3                           2.     GRADE TWO                 169.0000       14.0833       14.6809      215.5208    (    12)
   MGP                       1.     CAI YR 1, CAI YR 2         14.5000        4.8333       12.8722      165.6933    (     3)
   MGP                       2.     NON YR 1, NON YR 2         98.2000       16.3667       16.2735      264.8266    (     6)
   MGP                       4.     CAI YR 1, NON YR 2         56.3000       18.7667       13.4448      180.7634    (     3)

K3                           3.     GRADE THREE                -0.9000       -0.0818       10.6795      114.0517    (    11)
   MGP                       1.     CAI YR 1, CAI YR 2        -16.5000      -16.5000        0.0            0.0      (     1)
   MGP                       2.     NON YR 1, NON YR 2         11.0000        1.2222       10.2087      104.2176    (     9)
   MGP                       3.     NON YR 1, CAI YR 2          4.6000        4.6000        0.0            0.0      (     1)

K3                           4.     GRADE FOUR                128.7000        6.1286       12.3477      152.4662    (    21)
   MGP                       1.     CAI YR 1, CAI YR 2         71.9000       10.2714       10.3556      107.2390    (     7)
   MGP                       2.     NON YR 1, NON YR 2         56.8000        4.0571       13.0846      171.2058    (    14)

K3                           5.     GRADE FIVE                 -4.1000       -0.3154       11.7565      138.2146    (    13)
   MGP                       1.     CAI YR 1, CAI YR 2         -5.7000       -1.9000       14.8704      221.1290    (     3)
   MGP                       2.     NON YR 1, NON YR 2          1.6000        0.1600       11.5783      134.0561    (    10)

K3                           6.     GRADE SIX                  24.9000        2.2636        4.9738       24.7385    (    11)
   MGP                       1.     CAI YR 1, CAI YR 2          8.0000        0.8889        4.3248       18.7036    (     9)
   MGP                       2.     NON YR 1, NON YR 2         16.9000        8.4500        2.0506        4.2050    (     2)

  TOTAL CASES =      254
MISSING CASES =      183 OR  72.0 PCT.
```

TABLE A39
Descriptive Statistics for NCE Pretest, Post Test
and Gain Scores by Treatment and Grade Level for
Reading in the Year 2 - Year 3 Longitudinal File
READING PRETEST Year 2

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE    W31        READING PRETEST NCE SCORE 01
    BROKEN DOWN BY    X3         GRADE LEVEL 82
                BY    RGP        READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE     VALUE LABEL                      SUM           MEAN        STD DEV       VARIANCE        N

FOR ENTIRE POPULATION                                           3793.9995        39.5167      11.5556       133.5433    (   96)

X3                          2.     GRADE TWO                     461.3999        41.9454      17.3620       301.4407    (   11)
   RGP                      2.     NON YR 2, NON YR 3            356.2000        50.8857      12.2396       149.8048    (    7)
   RGP                      3.     NON YR 2, CAI YR 3              6.7000         6.7000       0.0            0.0      (    1)
   RGP                      4.     CAI YR 2, NON YR 3             98.5000        32.8333       5.9181        35.0234    (    3)

X3                          3.     GRADE THREE                  1092.3999        43.6960       9.4134        88.6121    (   25)
   RGP                      1.     CAI YR 2, CAI YR 3            618.7999        44.2000       9.0756        82.3661    (   14)
   RGP                      2.     NON YR 2, NON YR 3            393.9999        43.7778      11.1375       124.0270    (    9)
   RGP                      3.     NON YR 2, CAI YR 3             77.8000        38.9000       3.3941        11.5199    (    2)

X3                          4.     GRADE FOUR                    925.4999        42.0682      10.8003       116.6461    (   22)
   RGP                      1.     CAI YR 2, CAI YR 3            413.9999        41.4000       8.7807        77.1000    (   10)
   FGP                      2.     NON YR 2, NON YR 3            300.1000        37.5125      11.7676       138.4812    (    8)
   RGP                      3.     NON YR 2, CAI YR 3             63.5000        63.5000       0.0            0.0      (    1)
   RGP                      4.     CAI YR 2, NON YR 3            147.9000        49.3000       1.2124         1.4700    (    3)

X3                          5.     GRADE FIVE                    776.8999        35.3136       7.5248        56.6231    (   22)
   RGP                      1.     CAI YR 2, CAI YR 3            252.3000        31.5375       8.3065        68.9984    (    8)
   RGP                      2.     NON YR 2, NON YR 3            396.0999        36.0091       4.9326        24.3309    (   11)
   RGP                      4.     CAI YR 2, NON YR 3            128.1000        42.7000       9.5582        91.3600    (    3)

X3                          6.     GRADE SIX                     476.8999        36.6846       8.1484        66.3974    (   13)
   RGP                      1.     CAI YR 2, CAI YR 3            212.7000        35.4500      12.1512       147.6510    (    6)
   RGP                      2.     NON YR 2, NON YR 3            264.2000        37.7429       2.6176         6.8520    (    7)

X3                         11.     GRADE ELEVEN                   59.5000        29.7500       3.8891        15.1250    (    2)
   RGP                      1.     CAI YR 2, CAI YR 3             27.2000        27.2000       0.0            0.0      (    1)
   FGP                      3.     NON YR 2, CAI YR 3             32.3000        32.3000       0.0            0.0      (    1)

X3                         12.     GRADE TWELVE                    1.0000         1.0000       0.0            0.0      (    1)
   RGP                      1.     CAI YR 2, CAI YR 3              1.0000         1.0000       0.0            0.0      (    1)

  TOTAL CASES =      162
MISSING CASES =       66 OR  40.7 PCT.
```

TABLE A40

Descriptive Statistics for ICE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 2 - Year 3 Longitudinal File

READING3 POST TEST Year 2

```
- - - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - -
CRITERION VARIABLE   R33       READING POSTTEST AGE SCORE #1
    BROKEN DOWN BY   X3        GRADE LEVEL 82
                BY   RGP       READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                    CODE      VALUE LABEL                        SUM           MEAN         STD DEV       VARIANCE          N

FOR ENTIRE POPULATION                                               3929.5995        41.8042        13.7673       189.5396    (     94)

X3                            2.      GRADE TWO                      406.8999        36.9909        15.7720       248.7549    (     11)
   RGP                        2.      NON YR 2, NON YR 3             285.6999        40.8143        17.3706       301.7315    (      7)
   RGP                        3.      NON YR 2, CAI YR 3              35.1000        35.1000         0.0            0.0      (      1)
   RGP                        4.      CAI YR 2, NON YR 3              86.1000        28.7000        13.5100       182.5200    (      3)

X3                            3.      GRADE THREE                   1243.2999        51.8042        15.8343       250.7308    (     24)
   RGP                        1.      CAI YR 2, CAI YR 3             689.3999        53.0308        17.8129       317.2999    (     13)
   RGP                        2.      NON YR 2, NON YR 3             460.1999        51.1333        14.4781       209.6350    (      9)
   RGP                        3.      NON YR 2, CAI YR 3              83.7000        41.8500         4.0305        16.2450    (      2)

X3                            4.      GRADE FOUR                     920.1999        43.8190         8.5960        73.8915    (     21)
   RGP                        1.      CAI YR 2, CAI YR 3             435.5999        43.5600         7.7882        60.6549    (     10)
   RGP                        2.      NON YR 2, NON YR 3             345.9000        43.2375        11.0825       122.8221    (      8)
   RGP                        3.      NON YR 2, CAI YR 3              40.8000        40.8000         0.0            0.0      (      1)
   RGP                        4.      CAI YR 2, NON YR 3              97.9000        48.9500         3.0406         9.2450    (      2)

X3                            5.      GRADE FIVE                     802.3999        36.4727         7.6393        58.3592    (     22)
   RGP                        1.      CAI YR 2, CAI YR 3             293.0999        36.6375         8.9291        79.7306    (      8)
   RGP                        2.      NON YR 2, NON YR 3             384.2000        34.9273         7.3984        54.7362    (     11)
   RGP                        4.      CAI YR 2, NON YR 3             125.1000        41.7000         2.4021         5.7700    (      3)

X3                            6.      GRADE SIX                      483.2999        37.1769        11.3500       128.8116    (     13)
   RGP                        1.      CAI YR 2, CAI YR 3             240.2000        40.0333        14.9796       224.3880    (      6)
   RGP                        2.      NON YR 2, NON YR 3             243.1000        34.7286         7.4455        55.4357    (      7)

X3                           11.      GRADE ELEVEN                    54.4000        27.2000        19.9404       397.6197    (      2)
   RGP                        1.      CAI YR 2, CAI YR 3              13.1000        13.1000         0.0            0.0      (      1)
   RGP                        3.      NON YR 2, CAI YR 3              41.3000        41.3000         0.0            0.0      (      1)

X3                           12.      GRADE TWELVE                    13.1000        13.1000         0.0            0.0      (      1)
   RGP                        1.      CAI YR 2, CAI YR 3              13.1000        13.1000         0.0            0.0      (      1)

  TOTAL CASES =      162
MISSING CASES =       68 OR  42.0 PCT.
```

TABLE A41
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 2 - Year 3 Longitudinal File
READING PRETEST Year 3

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   X31       READING PRETEST NCE SCORE 82
    BROKEN DOWN BY   X3        GRADE LEVEL 82
                BY   RGP       READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                 CODE     VALUE LABEL                   SUM          MEAN       STD DEV      VARIANCE         N

FOR ENTIRE POPULATION                                         3606.4994     37.5677     12.0914     146.2022     (    96)


X3                         2.     GRADE TWO                    521.9999     47.4545     10.9360     119.5967     (    11)
   RGP                     2.     NON YR 2, NON YR 3           327.4000     46.7714     11.7257     137.4924     (     7)
   RGP                     3.     NON YR 2, CAI YR 3            33.7000     33.7000      0.0          0.0        (     1)
   RGP                     4.     CAI YR 2, NON YR 3           160.9000     53.6333      5.6580      32.0133     (     3)

X3                         3.     GRADE THREE                 1034.1999     41.3680     10.6446     113.3073     (    25)
   RGP                     1.     CAI YR 2, CAI YR 3           598.7999     42.7714      8.9242      79.6407     (    14)
   RGP                     2.     NON YR 2, NON YR 3           378.0000     42.0000     12.5844     158.3675     (     9)
   RGP                     3.     NON YR 2, CAI YR 3            57.4000     28.7000      8.0610      64.9799     (     2)

X3                         4.     GRADE FOUR                   842.6999     38.3045      9.3138      86.7462     (    22)
   RGP                     1.     CAI YR 2, CAI YR 3           399.6999     39.9700      5.4074      29.2401     (    10)
   RGP                     2.     NON YR 2, NON YR 3           280.3000     35.0375     13.4720     181.4941     (     8)
   RGP                     3.     NON YR 2, CAI YR 3            50.0000     50.0000      0.0          0.0        (     1)
   RGP                     4.     CAI YR 2, NON YR 3           112.7000     37.5667      4.2724      18.2534     (     3)

X3                         5.     GRADE FIVE                   686.8998     31.2227     11.4626     131.3895     (    22)
   RGP                     1.     CAI YR 2, CAI YR 3           242.2999     30.2875      6.7626      45.7327     (     8)
   RGP                     2.     NON YR 2, NON YR 3           308.3999     28.0364     13.1213     172.1686     (    11)
   RGP                     4.     CAI YR 2, NON YR 3           136.2000     45.4000      1.6371       2.6800     (     3)

X3                         6.     GRADE SIX                    461.7999     35.5231     11.1923     125.2666     (    13)
   RGP                     1.     CAI YR 2, CAI YR 3           212.5999     35.4333     13.4945     182.1027     (     6)
   RGP                     2.     NON YR 2, NON YR 3           249.2000     35.6000      9.9385      98.7701     (     7)

X3                        11.     GRADE ELEVEN                  57.9000     28.9500      2.4749       6.1250     (     2)
   RGP                     1.     CAI YR 2, CAI YR 3            30.7000     30.7000      0.0          0.0        (     1)
   RGP                     3.     NON YR 2, CAI YR 3            27.2000     27.2000      0.0          0.0        (     1)

X3                        12.     GRADE TWELVE                   1.0000      1.0000      0.0          0.0        (     1)
   RGP                     1.     CAI YR 2, CAI YR 3             1.0000      1.0000      0.0          0.0        (     1)

  TOTAL CASES =      162
MISSING CASES =       66 OR  40.7 PCT.
```

TABLE A42
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 2 - Year 3 Longitudinal File
READING POST TEST Year 3

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - - -
CRITERION VARIABLE    X33        READING POSTTEST NCE SCORE 82
    BROKEN DOWN BY    X3         GRADE LEVEL 82
                BY    RGP        READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                CODE     VALUE LABEL                        SUM           MEAN        STD DEV       VARIANCE         N

FOR ENTIRE POPULATION                                            3906.6994       42.9308      12.7911       163.6133    (   91)


X3                        2.     GRADE TWO                        526.8999       47.9000      15.1374       229.1426    (   11)
   RGP                    2.     NON YR 2, NON YR 3               338.0000       48.2857      11.2645       126.8214    (    7)
   RGP                    3.     NON YR 2, CAI YR 3                17.3000       17.3000       0.0            0.0      (    1)
   RGP                    4.     CAI YR 2, NON YR 3               171.6000       57.2000      12.9155       166.8100    (    3)

X3                        3.     GRADE THREE                     1210.4996       48.4200      13.4107       179.8459    (   25)
   RGP                    1.     CAI YR 2, CAI YR 3               717.3999       51.2429      15.8372       250.8181    (   14)
   RGP                    2.     NON YR 2, NON YR 3               415.2999       46.1444       9.4430        89.1703    (    9)
   RGP                    3.     NON YR 2, CAI YR 3                77.8000       38.9000       1.4142         2.0000    (    2)

X3                        4.     GRADE FOUR                       856.9999       38.9545       8.7714        76.9369    (   22)
   RGP                    1.     CAI YR 2, CAI YR 3               430.4999       43.0500       4.0067        16.0534    (   10)
   RGP                    2.     NON YR 2, NON YR 3               256.4000       32.0500       7.6081        57.8826    (    8)
   RGP                    3.     NON YR 2, CAI YR 3                61.0000       61.0000       0.0            0.0      (    1)
   RGP                    4.     CAI YR 2, NON YR 3               109.1000       36.3667       2.3094         5.3333    (    3)

X3                        5.     GRADE FIVE                       717.3999       39.8555      11.9593       143.0238    (   18)
   RGP                    1.     CAI YR 2, CAI YR 3               249.9000       41.6500      11.1525       124.3790    (    6)
   RGP                    2.     NON YR 2, NON YR 3               380.5999       38.0600      13.7627       189.4026    (   10)
   RGP                    4.     CAI YR 2, NON YR 3                86.9000       43.4500       4.7376        22.4450    (    2)

X3                        6.     GRADE SIX                        525.3999       43.7833       6.8117        46.3997    (   12)
   RGP                    1.     CAI YR 2, CAI YR 3               238.2000       47.6400       6.9934        48.9080    (    5)
   RGP                    2.     NON YR 2, NON YR 3               287.2000       41.0286       5.5866        31.2123    (    7)

X3                       11.     GRADE ELEVEN                      68.5000       34.2500       9.9702        99.4049    (    2)
   RGP                    1.     CAI YR 2, CAI YR 3                27.2000       27.2000       0.0            0.0      (    1)
   RGP                    3.     NON YR 2, CAI YR 3                41.3000       41.3000       0.0            0.0      (    1)

X3                       12.     GRADE TWELVE                       1.0000        1.0000       0.0            0.0      (    1)
   RGP                    1.     CAI YR 2, CAI YR 3                 1.0000        1.0000       0.0            0.0      (    1)

  TOTAL CASES =      162
MISSING CASES =       71 OR  43.8 PCT.
```

TABLE A43

Descriptive Statistics for NCS Pretest, Post Test
and Gain Scores by Treatment and Grade Level for
Reading in the Year 2 - Year 3 Longitudinal File
GAIN 1

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   RG1        READING GAIN PRE YR2 TO POST YR2
    BROKEN DOWN BY   X3         GRADE LEVEL 82
                BY   RGP        READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE     VALUE LABEL                      SUM         MEAN      STD DEV     VARIANCE          N

FOR ENTIRE POPULATION                                          226.3999       2.4085      12.1829     148.4231    (    94)

X3                          2.     GRADE TWO                   -54.5000      -4.9545      17.9220     321.1980    (    11)
   RGP                      2.     NON YR 2, NON YR 3          -70.5000     -10.0714      14.0059     196.4124    (     7)
   RGP                      3.     NON YR 2, CAI YR 3           28.4000      28.4000       0.0          0.0       (     1)
   RGP                      4.     CAI YR 2, NON YR 3          -12.4000      -4.1333      19.0222     361.8433    (     3)

X3                          3.     GRADE THREE                 193.4000       8.0583      14.3652     206.3590    (    24)
   RGP                      1.     CAI YR 2, CAI YR 3          123.1000       9.4692      17.2400     297.2190    (    13)
   RGP                      2.     NON YR 2, NON YR 3           64.4000       7.1556      11.3760     129.4077    (     9)
   RGP                      3.     NON YR 2, CAI YR 3            5.9000       2.9500       7.4246      55.1246    (     2)

X3                          4.     GRADE FOUR                   48.6000       2.3143       9.0413      81.7443    (    21)
   RGP                      1.     CAI YR 2, CAI YR 3           21.6000       2.1600       7.0491      49.6893    (    10)
   RGP                      2.     NON YR 2, NON YR 3           45.8000       5.7250      10.0568     101.1365    (     8)
   RGP                      3.     NON YR 2, CAI YR 3          -16.7000     -16.7000       0.0          0.0       (     1)
   RGP                      4.     CAI YR 2, NON YR 3           -2.1000      -1.0500       3.0406       9.2450    (     2)

X3                          5.     GRADE FIVE                   25.5000       1.1591       8.2444      67.9701    (    22)
   RGP                      1.     CAI YR 2, CAI YR 3           40.4000       5.0500       9.3371      86.1171    (     8)
   RGP                      2.     NON YR 2, NON YR 3          -11.9000      -1.0818       6.5606      43.0436    (    11)
   RGP                      4.     CAI YR 2, NON YR 3           -3.0000      -1.0000       9.7412      94.8901    (     3)

X3                          6.     GRADE SIX                     6.4000       0.4923       8.7950      77.3524    (    13)
   RGP                      1.     CAI YR 2, CAI YR 3           27.5000       4.5833       7.3982      54.7337    (     6)
   RGP                      2.     NON YR 2, NON YR 3          -21.1000      -3.0143       8.8324      78.0115    (     7)

X3                         11.     GRADE ELEVEN                 -5.1000      -2.5500      16.3342     266.8049    (     2)
   RGP                      1.     CAI YR 2, CAI YR 3          -14.1000     -14.1000       0.0          0.0       (     1)
   RGP                      3.     NON YR 2, CAI YR 3            9.0000       9.0000       0.0          0.0       (     1)

X3                         12.     GRADE TWELVE                 12.1000      12.1000       0.0          0.0       (     1)
   RGP                      1.     CAI YR 2, CAI YR 3           12.1000      12.1000       0.0          0.0       (     1)

  TOTAL CASES =      162
MISSING CASES =       68 OR  42.0 PCT.
```

TABLE A44
Descriptive Statistics for NCB Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 2 - Year 3 Longitudinal File
GAIN 2

```
- - - - - - - - - - - - - - - - -   D E S C R I P T I O N   O F   S U B P O P U L A T I O N S   - - - - - - - - - - - - - - - - -
CRITERION VARIABLE    RG2        READING GAIN PRE YR2 TO PRE YR3
    BROKEN DOWN BY    X3         GRADE LEVEL 82
                BY    RGP        READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE    VALUE LABEL                       SUM          MEAN        STD DEV        VARIANCE          N

FOR ENTIRE POPULATION                                            -187.1001      -1.9490      12.1765        148.2671    (    96)


X3                         2.     GRADE TWO                        60.6000       5.5091      21.3446        455.5908    (    11)
   RGP                     2.     NON YR 2, NON YR 3              -28.8000      -4.1143      20.5175        420.9681    (     7)
   RGP                     3.     NON YR 2, CAI YR 3               27.0000      27.0000       0.0             0.0      (     1)
   RGP                     4.     CAI YR 2, NON YR 3               62.4000      20.8000      10.4532        109.2700    (     3)

X3                         3.     GRADE THREE                     -58.2000      -2.3280      10.6457        113.3313    (    25)
   RGP                     1.     CAI YR 2, CAI YR 3              -20.0000      -1.4286      10.8409        117.5251    (    14)
   RGP                     2.     NON YR 2, NON YR 3              -17.8000      -1.9778      10.7371        115.2844    (     9)
   RGP                     3.     NON YR 2, CAI YR 3              -20.4000     -10.2000      11.4551        131.2197    (     2)

X3                         4.     GRADE FOUR                      -82.8000      -3.7636       8.4384         71.2065    (    22)
   RGP                     1.     CAI YR 2, CAI YR 3              -14.3000      -1.4300       7.0401         49.5624    (    10)
   RGP                     2.     NON YR 2, NON YR 3              -19.8000      -2.4750       9.7621         95.2993    (     8)
   RGP                     3.     NON YR 2, CAI YR 3              -13.5000     -13.5000       0.0             0.0      (     1)
   RGP                     4.     CAI YR 2, NON YR 3              -35.2000     -11.7333       3.8136         14.5434    (     3)

X3                         5.     GRADE FIVE                      -90.0000      -4.0909      12.1430        147.4532    (    22)
   RGP                     1.     CAI YR 2, CAI YR 3              -10.4000      -1.3000      10.9922        120.8289    (     8)
   RGP                     2.     NON YR 2, NON YR 3              -87.7000      -7.9727      13.2136        174.5982    (    11)
   RGP                     4.     CAI YR 2, NON YR 3                8.1000       2.7000       8.3163         69.1601    (     3)

X3                         6.     GRADE SIX                       -15.1000      -1.1615      10.7136        114.7809    (    13)
   RGP                     1.     CAI YR 2, CAI YR 3               -0.1000      -0.0167      11.4302        130.6497    (     6)
   RGP                     2.     NON YR 2, NON YR 3              -15.0000      -2.1429      10.8744        118.2524    (     7)

X3                        11.     GRADE ELEVEN                     -1.6000      -0.8000       6.0811         36.9799    (     2)
   RGP                     1.     CAI YR 2, CAI YR 3                3.5000       3.5000       0.0             0.0      (     1)
   RGP                     3.     NON YR 2, CAI YR 3               -5.1000      -5.1000       0.0             0.0      (     1)

X3                        12.     GRADE TWELVE                      0.0          0.0          0.0             0.0      (     1)
   RGP                     1.     CAI YR 2, CAI YR 3                0.0          0.0          0.0             0.0      (     1)

 TOTAL CASES =      162
MISSING CASES =      66 OR  40.7 PCT.
```

TABLE A45

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 2 - Year 3 Longitudinal File

GAIN 3

```
- - - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - -
CRITERION VARIABLE    RG3        READING GAIN PRE YR2 TO POST YR3
   BROKEN DOWN BY     X3         GRADE LEVEL 82
               BY     RGP        READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE    VALUE LABEL                        SUM          MEAN       STD DEV      VARIANCE        N

FOR ENTIRE POPULATION                                            270.0999       2.9681     12.8370      164.7877    (    91)


X3                         2.     GRADE TWO                        65.5000       5.9545     18.5780      345.1427    (    11)
   RGP                     2.     NON YR 2, NON YR 3              -18.2000      -2.6000     14.7160      216.5599    (     7)
   RGP                     3.     NON YR 2, CAI YR 3               10.6000      10.6000      0.0           0.0       (     1)
   RGP                     4.     CAI YR 2, NON YR 3               73.1000      24.3667     17.3379      300.6033    (     3)

X3                         3.     GRADE THREE                     118.1000       4.7240     14.5316      211.1669    (    25)
   RGP                     1.     CAI YR 2, CAI YR 3               98.6000       7.0429     16.1430      260.5965    (    14)
   RGP                     2.     NON YR 2, NON YR 3               19.5000       2.1667     13.5811      184.4450    (     9)
   RGP                     3.     NON YR 2, CAI YR 3                0.0          0.0         5.0912       25.9199    (     2)

X3                         4.     GRADE FOUR                      -68.5000      -3.1136     10.2538      105.1402    (    22)
   RGP                     1.     CAI YR 2, CAI YR 3               16.5000       1.6500      7.3736       54.3701    (    10)
   RGP                     2.     NON YR 2, NON YR 3              -43.7000      -5.4625     12.8467      165.0369    (     8)
   RGP                     3.     NON YR 2, CAI YR 3               -2.5000      -2.5000      0.0           0.0       (     1)
   RGP                     4.     CAI YR 2, NON YR 3              -38.8000     -12.9333      1.0970        1.2033    (     3)

X3                         5.     GRADE FIVE                       66.8000       3.7111     11.0368      121.8115    (    18)
   RGP                     1.     CAI YR 2, CAI YR 3               51.6000       8.6000      8.9315       79.7723    (     6)
   RGP                     2.     NON YR 2, NON YR 3               11.7000       1.1700     12.3905      153.5233    (    10)
   RGP                     4.     CAI YR 2, NON YR 3                3.5000       1.7500      8.5560       73.2051    (     2)

X3                         6.     GRADE SIX                        79.2000       6.6000      8.6423       74.6891    (    12)
   RGP                     1.     CAI YR 2, CAI YR 3               56.2000      11.2400     10.0344      100.6880    (     5)
   RGP                     2.     NON YR 2, NON YR 3               23.0000       3.2857      6.2808       39.4481    (     7)

X3                        11.     GRADE ELEVEN                      9.0000       4.5000      6.3640       40.5000    (     2)
   RGP                     1.     CAI YR 2, CAI YR 3                0.0          0.0         0.0           0.0       (     1)
   RGP                     3.     NON YR 2, CAI YR 3                9.0000       9.0000      0.0           0.0       (     1)

X3                        12.     GRADE TWELVE                      0.0          0.0         0.0           0.0       (     1)
   RGP                     1.     CAI YR 2, CAI YR 3                0.0          0.0         0.0           0.0       (     1)

  TOTAL CASES =      162
MISSING CASES =       71 OR  43.8 PCT.
```

TABLE A46
Descriptive Statistics for NCE Pretest, Post Test
and Gain Scores by Treatment and Grade Level for
Reading in the Year 2 - Year 3 Longitudinal File
GAIN 4

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - -
CRITERION VARIABLE    RG4       READING GAIN OVER SUMMER
    BROKEN DOWN BY    X3        GRADE LEVEL 82
                BY    RGP       READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                    CODE      VALUE LABEL                   SUM          MEAN        STD DEV      VARIANCE          N

FOR ENTIRE POPULATION                                          -401.8000      -4.2745       13.8584      192.0557    (    94)

X3                            2.      GRADE TWO                 115.1000      10.4636       22.0464      486.0425    (    11)
   RGP                        2.      NON YR 2, NON YR 3         41.7000       5.9571       24.4680      598.6630    (     7)
   RGP                        3.      NON YR 2, CAI YR 3         -1.4000      -1.4000        0.0           0.0      (     1)
   RGP                        4.      CAI YR 2, NON YR 3         74.8000      24.9333       13.3061      176.6532    (     3)

X3                            3.      GRADE THREE              -252.7000     -10.5292       12.2362      149.7239    (    24)
   RGP                        1.      CAI YR 2, CAI YR 3       -144.2000     -11.0923       13.8449      191.6807    (    13)
   RGP                        2.      NON YR 2, NON YR 3        -82.2000      -9.1333       11.6825      136.4801    (     9)
   RGP                        3.      NON YR 2, CAI YR 3        -26.3000     -13.1500        4.0305       16.2450    (     2)

X3                            4.      GRADE FOUR               -118.6000      -5.6476        9.4283       88.8936    (    21)
   RGP                        1.      CAI YR 2, CAI YR 3        -35.9000      -3.5900        7.1468       51.0766    (    10)
   RGP                        2.      NON YR 2, NON YR 3        -65.6000      -8.2000       12.1682      148.0657    (     8)
   RGP                        3.      NON YR 2, CAI YR 3          3.2000       3.2000        0.0           0.0      (     1)
   RGP                        4.      CAI YR 2, NON YR 3        -20.3000     -10.1500        8.2732       68.4451    (     2)

X3                            5.      GRADE FIVE               -115.5001      -5.2500       11.0167      121.3683    (    22)
   RGP                        1.      CAI YR 2, CAI YR 3        -50.8000      -6.3500        8.2713       68.4162    (     8)
   RGP                        2.      NON YR 2, NON YR 3        -75.8000      -6.8909       13.2831      176.4409    (    11)
   RGP                        4.      CAI YR 2, NON YR 3         ,11.1000       3.7000        3.5930       12.9100    (     3)

X3                            6.      GRADE SIX                 -21.5000      -1.6538        9.6444       93.0144    (    13)
   RGP                        1.      CAI YR 2, CAI YR 3        -27.6000      -4.6000       11.2930      127.5320    (     6)
   RGP                        2.      NON YR 2, NON YR 3          6.1000       0.8714        7.9770       63.6324    (     7)

X3                           11.      GRADE ELEVEN                3.5000       1.7500       22.4153      502.4450    (     2)
   RGP                        1.      CAI YR 2, CAI YR 3         17.6000      17.6000        0.0           0.0      (     1)
   RGP                        3.      NON YR 2, CAI YR 3        -14.1000     -14.1000        0.0           0.0      (     1)

X3                           12.      GRADE TWELVE              -12.1000     -12.1000        0.0           0.0      (     1)
   RGP                        1.      CAI YR 2, CAI YR 3        -12.1000     -12.1000        0.0           0.0      (     1)

  TOTAL CASES =      162
MISSING CASES =       68 OR  42.0 PCT.
```

TABLE A47
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading in the Year 2 - Year 3 Longitudinal File
GAIN 5

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - -
CRITERION VARIABLE   RG5       READING GAIN PRE YR3 TO POST YR3
    BROKEN DOWN BY   X3        GRADE LEVEL 82
                BY   RGP       READING TREATMENT GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                 CODE    VALUE LABEL                 SUM          MEAN        STD DEV      VARIANCE         N

FOR ENTIRE POPULATION                                     467.2999       5.1352       10.7608      115.7946     (   91)

X3                         2.    GRADE TWO                  4.9000       0.4455       13.1048      171.7340     (   11)
   RGP                     2.    NON YR 2, NON YR 3        10.6000       1.5143       12.5477      157.4448     (    7)
   RGP                     3.    NON YR 2, CAI YR 3       -16.4000     -16.4000        0.0           0.0        (    1)
   RGP                     4.    CAI YR 2, NON YR 3        10.7000       3.5667       15.0281      225.8432     (    3)

X3                         3.    GRADE THREE              176.3000       7.0520       11.2333      126.1866     (   25)
   RGP                     1.    CAI YR 2, CAI YR 3       118.6000       8.4714       13.0870      171.2699     (   14)
   RGP                     2.    NON YR 2, NON YR 3        37.3000       4.1444        8.9257       79.6678     (    9)
   RGP                     3.    NON YR 2, CAI YR 3        20.4000      10.2000        6.3640       40.5000     (    2)

X3                         4.    GRADE FOUR                14.3000       0.6500        7.7529       60.1073     (   22)
   RGP                     1.    CAI YR 2, CAI YR 3        30.6000       3.0600        3.4445       11.8640     (   10)
   RGP                     2.    NON YR 2, NON YR 3       -23.9000      -2.9875       10.9860      120.6926     (    8)
   RGP                     3.    NON YR 2, CAI YR 3        11.0000      11.0000        0.0           0.0        (    1)
   RGP                     4.    CAI YR 2, NON YR 3        -3.6000      -1.2000        3.7041       13.7200     (    3)

X3                         5.    GRADE FIVE               177.2000       9.8444       11.6320      135.3327     (   18)
   RGP                     1.    CAI YR 2, CAI YR 3        76.8000      12.8000       10.7374      115.2921     (    6)
   RGP                     2.    NON YR 2, NON YR 3       102.9000      10.2900       12.5299      156.9989     (   10)
   RGP                     4.    CAI YR 2, NON YR 3        -2.5000      -1.2500        3.1820       10.1250     (    2)

X3                         6.    GRADE SIX                 84.0000       7.0000        8.0608       64.9764     (   12)
   RGP                     1.    CAI YR 2, CAI YR 3        46.0000       9.2000        8.3078       69.0200     (    5)
   RGP                     2.    NON YR 2, NON YR 3        38.0000       5.4286        8.1381       66.1950     (    7)

X3                        11.    GRADE ELEVEN              10.6000       5.3000       12.4451      154.8756     (    2)
   RGP                     1.    CAI YR 2, CAI YR 3        -3.5000      -3.5000        0.0           0.0        (    1)
   RGP                     3.    NON YR 2, CAI YR 3        14.1000      14.1000        0.0           0.0        (    1)

X3                        12.    GRADE TWELVE               0.0          0.0           0.0           0.0        (    1)
   RGP                     1.    CAI YR 2, CAI YR 3         0.0          0.0           0.0           0.0        (    1)

  TOTAL CASES =      162
MISSING CASES =       71 OR  43.8 PCT.
```

TABLE A48

Descriptive Statistics for NCE Pretest, Post Test
and Gain Scores by Treatment and Grade Level for
Mathematics in the Year 2 - Year 3 Longitudinal File
MATHEMATICS PRETEST Year 2

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   W35       MATH PRETEST NCE SCORE 81
    BROKEN DOWN BY   X3        GRADE LEVEL 82
                BY   MGP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                 CODE     VALUE LABEL                     SUM          MEAN        STD DEV      VARIANCE          N

FOR ENTIRE POPULATION                                          1857.3997      39.5191      13.1424      172.7220     (    47)

X3                         1.     GRADE ONE                      17.3000      17.3000       0.0           0.0        (     1)
   MGP                     2.     NON YR 2, NON YR 3             17.3000      17.3000       0.0           0.0        (     1)

X3                         2.     GRADE TWO                     147.0000      36.7500       8.2225       67.6100     (     4)
   MGP                     1.     CAI YR 2, CAI YR 3             48.9000      48.9000       0.0           0.0        (     1)
   MGP                     2.     NON YR 2, NON YR 3             64.4000      32.2000       2.1213        4.5000     (     2)
   MGP                     4.     CAI YR 2, NON YR 3             33.7000      33.7000       0.0           0.0        (     1)

X3                         3.     GRADE THREE                   261.9000      37.4143      15.5021      240.3146     (     7)
   MGP                     1.     CAI YR 2, CAI YR 3            158.1000      39.5250       6.6143       43.7491     (     4)
   MGP                     2.     NON YR 2, NON YR 3             40.3000      20.1500       4.0305       16.2451     (     2)
   MGP                     4.     CAI YR 2, NON YR 3             63.5000      63.5000       0.0           0.0        (     1)

X3                         4.     GRADE FOUR                    632.3999      45.1714      13.2427      175.3663     (    14)
   MGP                     1.     CAI YR 2, CAI YR 3            411.2000      51.4000      12.3439      152.3714     (     8)
   MGP                     2.     NON YR 2, NON YR 3            129.0000      32.2500       7.3314       53.7500     (     4)
   MGP                     4.     CAI YR 2, NON YR 3             92.2000      46.1000       8.4853       72.0000     (     2)

X3                         5.     GRADE FIVE                    447.6999      37.3083      12.7665      162.9845     (    12)
   MGP                     1.     CAI YR 2, CAI YR 3            225.8000      37.6333      13.5355      183.2107     (     6)
   MGP                     2.     NON YR 2, NON YR 3            140.4000      35.1000      16.6014      275.6066     (     4)
   MGP                     4.     CAI YR 2, NON YR 3             81.5000      40.7500       2.4749        6.1250     (     2)

X3                         6.     GRADE SIX                     267.7000      38.2429      12.7079      161.4895     (     7)
   MGP                     1.     CAI YR 2, CAI YR 3            139.2000      34.8000      13.9200      193.7667     (     4)
   MGP                     2.     NON YR 2, NON YR 3             74.3000      37.1500       9.1217       83.2049     (     2)
   MGP                     4.     CAI YR 2, NON YR 3             54.2000      54.2000       0.0           0.0        (     1)

X3                        10.     GRADE TEN                      83.4000      41.7000      13.2936      176.7201     (     2)
   MGP                     1.     CAI YR 2, CAI YR 3             83.4000      41.7000      13.2936      176.7201     (     2)

  TOTAL CASES =       163
MISSING CASES =       116 OR  71.2 PCT.
```

TABLE A49
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Mathematics in the Year 2 - Year 3 Longitudinal File
MATHEMATICS POST TEST Year 2

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE    M37        MATH POSTTEST NCE SCORE 81
    BROKEN DOWN BY    X3         GRADE LEVEL 82
                BY    MGP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                    CODE     VALUE LABEL                      SUM          MEAN        STD DEV      VARIANCE        N

FOR ENTIRE POPULATION                                             2229.5997       46.4500      12.3073      151.4702    (    48)


X3                            1.     GRADE ONE                      23.0000       23.0000       0.0           0.0       (     1)
   MGP                        2.     NON YR 2, NON YR 3             23.0000       23.0000       0.0           0.0       (     1)

X3                            2.     GRADE TWO                     223.6000       55.9000       8.0362       64.5800    (     4)
   MGP                        1.     CAI YR 2, CAI YR 3             64.9000       64.9000       0.0           0.0       (     1)
   MGP                        2.     NON YR 2, NON YR 3            112.9000       56.4500       3.1820       10.1250    (     2)
   MGP                        4.     CAI YR 2, NON YR 3             45.8000       45.8000       0.0           0.0       (     1)

X3                            3.     GRADE THREE                   366.2000       52.3143      11.2497      126.5548    (     7)
   MGP                        1.     CAI YR 2, CAI YR 3            220.7000       55.1750      11.6500      135.7225    (     4)
   MGP                        2.     NON YR 2, NON YR 3             84.5000       42.2500       6.4347       41.4049    (     2)
   MGP                        4.     CAI YR 2, NON YR 3             61.0000       61.0000       0.0           0.0       (     1)

X3                            4.     GRADE FOUR                    702.9999       50.2143      12.4034      153.8444    (    14)
   MGP                        1.     CAI YR 2, CAI YR 3            405.8999       50.7375       8.6664       75.1067    (     8)
   MGP                        2.     NON YR 2, NON YR 3            160.6000       40.1500      11.5901      134.3300    (     4)
   MGP                        4.     CAI YR 2, NON YR 3            136.5000       68.2500       3.7477       14.0450    (     2)

X3                            5.     GRADE FIVE                    532.9999       41.0000      12.1833      148.4333    (    13)
   MGP                        1.     CAI YR 2, CAI YR 3            291.2000       41.6000      15.5441      241.6200    (     7)
   MGP                        2.     NON YR 2, NON YR 3            155.2000       38.8000       8.8751       78.7666    (     4)
   MGP                        4.     CAI YR 2, NON YR 3             86.6000       43.3000       7.9196       62.7200    (     2)

X3                            6.     GRADE SIX                     295.2000       42.1714       8.6187       74.2824    (     7)
   MGP                        1.     CAI YR 2, CAI YR 3            162.3000       40.5750       7.3154       53.5158    (     4)
   MGP                        2.     NON YR 2, NON YR 3             75.4000       37.7000       0.0           0.0       (     2)
   MGP                        4.     CAI YR 2, NON YR 3             57.5000       57.5000       0.0           0.0       (     1)

X3                           10.     GRADE TEN                      85.6000       42.8000       7.2125       52.0200    (     2)
   MGP                        1.     CAI YR 2, CAI YR 3             85.6000       42.8000       7.2125       52.0200    (     2)

  TOTAL CASES =      163
MISSING CASES =      115 OR  70.6 PCT.
```

TABLE A50
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Mathematics in the Year 2 - Year 3 Longitudinal File
MATHEMATICS PRETEST Year 3

```
- - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   X35       MATH PRETEST NCE SCORE 82
    BROKEN DOWN BY   X3        GRADE LEVEL 82
                BY   MGP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                       CODE     VALUE LABEL                    SUM          MEAN       STD DEV      VARIANCE         N

FOR ENTIRE POPULATION                                             1725.7998       36.7191      12.1541      147.7233     (   47)


X3                               2.     GRADE TWO                  155.8000       38.9500       9.1831       84.3299     (    4)
   MGP                           1.     CAI YR 2, CAI YR 3          36.5000       36.5000       0.0           0.0        (    1)
   MGP                           2.     NON YR 2, NON YR 3          82.8000       41.4000      15.1321      228.9799     (    2)
   MGP                           4.     CAI YR 2, NON YR 3          36.5000       36.5000       0.0           0.0        (    1)

X3                               3.     GRADE THREE                273.0000       39.0000      13.4397      180.6266     (    7)
   MGP                           1.     CAI YR 2, CAI YR 3         154.6000       38.6500      17.2404      297.2299     (    4)
   MGP                           2.     NON YR 2, NON YR 3          68.4000       34.2000       4.9497       24.5000     (    2)
   MGP                           4.     CAI YR 2, NON YR 3          50.0000       50.0000       0.0           0.0        (    1)

X3                               4.     GRADE FOUR                 540.7999       38.6286      11.6157      134.9253     (   14)
   MGP                           1.     CAI YR 2, CAI YR 3         308.9000       38.6125      13.7508      189.0841     (    8)
   MGP                           2.     NON YR 2, NON YR 3         145.0000       36.2500      10.3307      106.7233     (    4)
   MGP                           4.     CAI YR 2, NON YR 3          86.9000       43.4500       6.2932       39.6045     (    2)

X3                               5.     GRADE FIVE                 405.8000       31.2154      13.1293      172.3797     (   13)
   MGP                           1.     CAI YR 2, CAI YR 3         174.5000       24.9286       9.9344       98.6924     (    7)
   MGP                           2.     NON YR 2, NON YR 3         164.1000       41.0250      16.1929      262.2093     (    4)
   MGP                           4.     CAI YR 2, NON YR 3          67.2000       33.6000       4.1012       16.8200     (    2)

X3                               6.     GRADE SIX                  273.3999       39.0571      12.3387      152.2428     (    7)
   MGP                           1.     CAI YR 2, CAI YR 3         151.4000       37.8500      16.6426      276.9765     (    4)
   MGP                           2.     NON YR 2, NON YR 3          81.9000       40.9500       8.2731       68.4450     (    2)
   MGP                           4.     CAI YR 2, NON YR 3          40.1000       40.1000       0.0           0.0        (    1)

X3                              10.     GRADE TEN                   77.0000       38.5000      13.2936      176.7201     (    2)
   MGP                           1.     CAI YR 2, CAI YR 3          77.0000       38.5000      13.2936      176.7201     (    2)

  TOTAL CASES =      163
MISSING CASES =      116 OR  71.2 PCT.
```

TABLE A51

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Mathematics in the Year 2 - Year 3 Longitudinal File

MATHEMATICS POST TEST Year 3

```
- - - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   X37         MATH POSTTEST NCE SCORE 82
    BROKEN DOWN BY   X3          GRADE LEVEL 82
                BY   MGP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE     VALUE LABEL                    SUM          MEAN       STD DEV       VARIANCE          N

FOR ENTIRE POPULATION                                        1776.8997       44.4225       8.7605        76.7453    (     40)


X3                          2.     GRADE TWO                  188.3000       47.0750      11.4517       131.1425    (      4)
   MGP                      1.     CAI YR 2, CAI YR 3          61.0000       61.0000       0.0            0.0       (      1)
   MGP                      2.     NON YR 2, NON YR 3          93.6000       46.8000       4.5255        20.4801    (      2)
   MGP                      4.     CAI YR 2, NON YR 3          33.7000       33.7000       0.0            0.0       (      1)

X3                          3.     GRADE THREE                215.8000       43.1600      11.8915       141.4030    (      5)
   MGP                      1.     CAI YR 2, CAI YR 3          92.4000       46.2000      17.6777       312.5000    (      2)
   MGP                      2.     NON YR 2, NON YR 3          70.2000       35.1000       1.9799         3.9200    (      2)
   MGP                      4.     CAI YR 2, NON YR 3          53.2000       53.2000       0.0            0.0       (      1)

X3                          4.     GRADE FOUR                 598.2999       46.0231       9.8874        97.7633    (     13)
   MGP                      1.     CAI YR 2, CAI YR 3         383.7000       47.9625      10.0662       101.3284    (      8)
   MGP                      2.     NON YR 2, NON YR 3         111.4000       37.1333       6.6365        44.0434    (      3)
   MGP                      4.     CAI YR 2, NON YR 3         103.2000       51.6000       6.7882        46.0801    (      2)

X3                          5.     GRADE FIVE                 414.0999       41.4100       8.3584        69.8632    (     10)
   MGP                      1.     CAI YR 2, CAI YR 3         188.2000       37.6400       7.3345        53.7930    (      5)
   MGP                      2.     NON YR 2, NON YR 3         150.0000       50.0000       4.8446        23.4700    (      3)
   MGP                      4.     CAI YR 2, NON YR 3          75.9000       37.9500       7.9903        63.8450    (      2)

X3                          6.     GRADE SIX                  264.5999       44.1000       2.3056         5.3160    (      6)
   MGP                      1.     CAI YR 2, CAI YR 3         136.2000       45.4000       1.2124         1.4700    (      3)
   MGP                      2.     NON YR 2, NON YR 3          87.1000       43.5500       3.1820        10.1250    (      2)
   MGP                      4.     CAI YR 2, NON YR 3          41.3000       41.3000       0.0            0.0       (      1)

X3                         10.     GRADE TEN                   95.8000       47.9000       4.5255        20.4800    (      2)
   MGP                      1.     CAI YR 2, CAI YR 3          95.8000       47.9000       4.5255        20.4800    (      2)

  TOTAL CASES =       163
MISSING CASES =       123 OR  75.5 PCT.
```

TABLE A52
Descriptive Statistics for NCE Pretest, Post Test
and Gain Scores by Treatment and Grade Level for
Mathematics in the Year 2 - Year 3 Longitudinal File
GAIN 1

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE    MG1        MATH GAIN PRE YR2 TO POST YR2
    BROKEN DOWN BY    X3         GRADE LEVEL 82
                BY    MGP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                    CODE     VALUE LABEL                      SUM          MEAN        STD DEV      VARIANCE         N

FOR ENTIRE POPULATION                                             312.3000        6.6447      12.1666     148.0750    (     47)


X3                            1.     GRADE ONE                      5.7000        5.7000       0.0           0.0      (      1)
   MGP                        2.     NON YR 2, NON YR 3             5.7000        5.7000       0.0           0.0      (      1)

X3                            2.     GRADE TWO                     76.6000       19.1500       6.1311       37.5900   (      4)
   MGP                        1.     CAI YR 2, CAI YR 3            16.0000       16.0000       0.0           0.0      (      1)
   MGP                        2.     NON YR 2, NON YR 3            48.5000       24.2500       1.0607        1.1250   (      2)
   MGP                        4.     CAI YR 2, NON YR 3            12.1000       12.1000       0.0           0.0      (      1)

X3                            3.     GRADE THREE                  104.3000       14.9000      11.4396      130.8633   (      7)
   MGP                        1.     CAI YR 2, CAI YR 3            62.6000       15.6500       9.4335       88.9900   (      4)
   MGP                        2.     NON YR 2, NON YR 3            44.2000       22.1000      10.4652      109.5200   (      2)
   MGP                        4.     CAI YR 2, NON YR 3            -2.5000       -2.5000       0.0           0.0      (      1)

X3                            4.     GRADE FOUR                    70.6000        5.0429      13.5993      184.9411   (     14)
   MGP                        1.     CAI YR 2, CAI YR 3            -5.3000       -0.6625      13.7506      189.0787   (      8)
   MGP                        2.     NON YR 2, NON YR 3            31.6000        7.9000       7.7430       59.9533   (      4)
   MGP                        4.     CAI YR 2, NON YR 3            44.3000       22.1500       4.7376       22.4450   (      2)

X3                            5.     GRADE FIVE                    25.4000        2.1167      12.1719    1[illegible]42   (     12)
   MGP                        1.     CAI YR 2, CAI YR 3             5.5000        0.9167      16.0326      257.0456   (      6)
   MGP                        2.     NON YR 2, NON YR 3            14.8000        3.7000       9.9294       98.5933   (      4)
   MGP                        4.     CAI YR 2, NON YR 3             5.1000        2.5500       3.4647       12.0050   (      2)

X3                            6.     GRADE SIX                     27.5000        3.9286       7.5725       57.3424   (      7)
   MGP                        1.     CAI YR 2, CAI YR 3            23.1000        5.7750       8.6407       74.6625   (      4)
   MGP                        2.     NON YR 2, NON YR 3             1.1000        0.5500       9.1217       83.2049   (      2)
   MGP                        4.     CAI YR 2, NON YR 3             3.3000        3.3000       0.0           0.0      (      1)

X3                           10.     GRADE TEN                      2.2000        1.1000       6.0811       36.9801   (      2)
   MGP                        1.     CAI YR 2, CAI YR 3             2.2000        1.1000       6.0811       36.9801   (      2)

  TOTAL CASES =       163
MISSING CASES =       116 OR  71.2 PCT.
```

TABLE A53

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Mathematics in the Year 2 - Year 3 Longitudinal File

GAIN 2

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - -
CRITERION VARIABLE    MG2        MATH GAIN PRE YR2 TO PRE YR3
    BROKEN DOWN BY    X3         GRADE LEVEL 82
                BY    MGP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                    CODE     VALUE LABEL                    SUM          MEAN        STD DEV      VARIANCE          N

FOR ENTIRE POPULATION                                           -153.2999      -3.3326      12.8347      164.7360    (     46)

X3                            2.     GRADE TWO                     8.8000       2.2000      12.6596      160.2615    (      4)
   MGP                        1.     CAI YR 2, CAI YR 3          -12.4000     -12.4000       0.0           0.0       (      1)
   MGP                        2.     NON YR 2, NON YR 3           18.4000       9.2000      13.0108      169.2799    (      2)
   MGP                        4.     CAI YR 2, NON YR 3            2.8000       2.8000       0.0           0.0       (      1)

X3                            3.     GRADE THREE                  11.1000       1.5857      14.5423      211.4781    (      7)
   MGP                        1.     CAI YR 2, CAI YR 3           -3.5000      -0.8750      14.4419      208.5690    (      4)
   MGP                        2.     NON YR 2, NON YR 3           28.1000      14.0500       8.9803       80.6452    (      2)
   MGP                        4.     CAI YR 2, NON YR 3          -13.5000     -13.5000       0.0           0.0       (      1)

X3                            4.     GRADE FOUR                  -91.6000      -6.5429      12.7377      162.2486    (     14)
   MGP                        1.     CAI YR 2, CAI YR 3         -102.3000     -12.7875      13.2990      176.8640    (      8)
   MGP                        2.     NON YR 2, NON YR 3           16.0000       4.0000       5.1478       26.5000    (      4)
   MGP                        4.     CAI YR 2, NON YR 3           -5.3000      -2.6500       2.1920        4.8050    (      2)

X3                            5.     GRADE FIVE                  -80.9000      -6.7417      13.0048      169.1244    (     12)
   MGP                        1.     CAI YR 2, CAI YR 3          -90.3000     -15.0500      11.0627      122.3570    (      6)
   MGP                        2.     NON YR 2, NON YR 3           23.7000       5.9250       7.9479       63.1692    (      4)
   MGP                        4.     CAI YR 2, NON YR 3          -14.3000      -7.1500       1.6263        2.6450    (      2)

X3                            6.     GRADE SIX                     5.7000       0.8143      12.8950      166.2814    (      7)
   MGP                        1.     CAI YR 2, CAI YR 3           12.2000       3.0500      12.0395      144.9500    (      4)
   MGP                        2.     NON YR 2, NON YR 3            7.6000       3.8000      17.3948      302.5798    (      2)
   MGP                        4.     CAI YR 2, NON YR 3          -14.1000     -14.1000       0.0           0.0       (      1)

X3                           10.     GRADE TEN                    -6.4000      -3.2000       0.0           0.0       (      2)
   MGP                        1.     CAI YR 2, CAI YR 3           -6.4000      -3.2000       0.0           0.0       (      2)

  TOTAL CASES =      163
MISSING CASES =      117 OR  71.8 PCT.
```

TABLE A54
Descriptive Statistics for NCE Pretest, Post Test
and Gain Scores by Treatment and Grade Level for
Mathematics in the Year 2 - Year 3 Longitudinal File
GAIN 3

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE    MG3        MATH GAIN PRE YR2 TO POST YR3
   BROKEN DOWN BY     X3         GRADE LEVEL 82
                BY    MGP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE     VALUE LABEL                        SUM          MEAN        STD DEV      VARIANCE        N

FOR ENTIRE POPULATION                                              176.1000        4.5154      11.3243      128.2397   (   39)

X3                          2.     GRADE TWO                        41.3000       10.3250       7.1201       50.6958   (    4)
   MGP                      1.     CAI YR 2, CAI YR 3               12.1000       12.1000       0.0           0.0      (    1)
   MGP                      2.     NON YR 2, NON YR 3               29.2000       14.6000       2.4042        5.7800   (    2)
   MGP                      4.     CAI YR 2, NON YR 3                0.0           0.0          0.0           0.0      (    1)

X3                          3.     GRADE THREE                      29.4000        5.8800      10.9598      120.1171   (    5)
   MGP                      1.     CAI YR 2, CAI YR 3                9.8000        4.9000       6.9296       48.0200   (    2)
   MGP                      2.     NON YR 2, NON YR 3               29.9000       14.9500       2.0506        4.2050   (    2)
   MGP                      4.     CAI YR 2, NON YR 3              -10.3000      -10.3000       0.0           0.0      (    1)

X3                          4.     GRADE FOUR                        7.2000        0.5538       9.2056       84.7436   (   13)
   MGP                      1.     CAI YR 2, CAI YR 3              -27.5000       -3.4375       8.8964       79.1454   (    8)
   MGP                      2.     NON YR 2, NON YR 3               23.7000        7.9000       7.8019       60.8700   (    3)
   MGP                      4.     CAI YR 2, NON YR 3               11.0000        5.5000       1.6971        2.8800   (    2)

X3                          5.     GRADE FIVE                       68.5000        7.6111      15.8272      250.5011   (    9)
   MGP                      1.     CAI YR 2, CAI YR 3               25.5000        6.3750      18.0136      324.4893   (    4)
   MGP                      2.     NON YR 2, NON YR 3               48.6000       16.2000      15.4405      238.4056   (    3)
   MGP                      4.     CAI YR 2, NON YR 3               -5.6000       -2.8000      10.4652      109.5200   (    2)

X3                          6.     GRADE SIX                        17.3000        2.8833      11.7176      137.3017   (    6)
   MGP                      1.     CAI YR 2, CAI YR 3               17.4000        5.8000      13.2639      175.9300   (    3)
   MGP                      2.     NON YR 2, NON YR 3               12.8000        6.4000       5.9397       35.2759   (    2)
   MGP                      4.     CAI YR 2, NON YR 3              -12.9000      -12.9000       0.0           0.0      (    1)

X3                         10.     GRADE TEN                        12.4000        6.2000       8.7681       76.8801   (    2)
   MGP                      1.     CAI YR 2, CAI YR 3               12.4000        6.2000       8.7681       76.8801   (    2)

  TOTAL CASES =      163
MISSING CASES =      124 OR  76.1 PCT.
```

TABLE A55
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Mathematics in the Year 2 - Year 3 Longitudinal File
GAIN 4

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   MG4      MATH GAIN OVER SUMMER
   BROKEN DOWN BY    X3       GRADE LEVEL 82
               BY    MGP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE   VALUE LABEL                  SUM          MEAN       STD DEV      VARIANCE         N

FOR ENTIRE POPULATION                                      -480.7999    -10.2298     10.7740      116.0782    (   47)


X3                          2.   GRADE TWO                  -67.8000    -16.9500     10.6403      113.2166    (    4)
   MGP                      1.   CAI YR 2, CAI YR 3         -28.4000    -28.4000      0.0           0.0       (    1)
   MGP                      2.   NON YR 2, NON YR 3         -30.1000    -15.0500     11.9501      142.8049    (    2)
   MGP                      4.   CAI YR 2, NON YR 3          -9.3000     -9.3000      0.0           0.0       (    1)

X3                          3.   GRADE THREE                -93.2000    -13.3143      5.9505       35.4081    (    7)
   MGP                      1.   CAI YR 2, CAI YR 3         -66.1000    -16.5250      6.0063       36.0758    (    4)
   MGP                      2.   NON YR 2, NON YR 3         -16.1000     -8.0500      1.4849        2.2050    (    2)
   MGP                      4.   CAI YR 2, NON YR 3         -11.0000    -11.0000      0.0           0.0       (    1)

X3                          4.   GRADE FOUR                -162.2000    -11.5857      9.6591       93.2982    (   14)
   MGP                      1.   CAI YR 2, CAI YR 3         -97.0000    -12.1250      9.1568       83.8479    (    8)
   MGP                      2.   NON YR 2, NON YR 3         -15.6000     -3.9000      3.2465       10.5400    (    4)
   MGP                      4.   CAI YR 2, NON YR 3         -49.6000    -24.8000      2.5456        6.4800    (    2)

X3                          5.   GRADE FIVE                -127.2000     -9.7846     13.2957      176.7747    (   13)
   MGP                      1.   CAI YR 2, CAI YR 3        -116.7000    -16.6714     10.3863      107.8757    (    7)
   MGP                      2.   NON YR 2, NON YR 3           8.9000      2.2250     13.5400      183.3293    (    4)
   MGP                      4.   CAI YR 2, NON YR 3         -19.4000     -9.7000      3.8184       14.5800    (    2)

X3                          6.   GRADE SIX                  -21.8000     -3.1143     10.9243      119.3414    (    7)
   MGP                      1.   CAI YR 2, CAI YR 3         -10.9000     -2.7250     10.9834      120.6358    (    4)
   MGP                      2.   NON YR 2, NON YR 3           6.5000      3.2500      8.2731       68.4450    (    2)
   MGP                      4.   CAI YR 2, NON YR 3         -17.4000    -17.4000      0.0           0.0       (    1)

X3                         10.   GRADE TEN                   -8.6000     -4.3000      6.0811       36.9801    (    2)
   MGP                      1.   CAI YR 2, CAI YR 3          -8.6000     -4.3000      6.0811       36.9801    (    2)

  TOTAL CASES =      163
MISSING CASES =      116 OR  71.2 PCT.
```

TABLE A56
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Mathematics in the Year 2 - Year 3 Longitudinal File
GAIN 5

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - -
CRITERION VARIABLE   MG5        MATH GAIN PRE YR3 TO POST YR3
   BROKEN DOWN BY    A3         GRADE LEVEL 82
               BY    MGP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                   CODE    VALUE LABEL                   SUM          MEAN        STD DEV       VARIANCE         N

FOR ENTIRE POPULATION                                         318.6999       7.9675       10.3014      106.1156    (    40)


A3                          2.     GRADE TWO                   32.5000       8.1250       13.1002      171.6158    (     4)
   MGP                      1.     CAI YR 2, CAI YR 3          24.5000      24.5000        0.0           0.0       (     1)
   MGP                      2.     NON YR 2, NON YR 3          10.8000       5.4000       10.6066      112.4998    (     2)
   MGP                      4.     CAI YR 2, NON YR 3          -2.8000      -2.8000        0.0           0.0       (     1)

A3                          3.     GRADE THREE                 36.4000       7.2800        9.1636       83.9719    (     5)
   MGP                      1.     CAI YR 2, CAI YR 3          31.4000      15.7000        6.9296       48.0199    (     2)
   MGP                      2.     NON YR 2, NON YR 3           1.8000       0.9000        6.9296       48.0200    (     2)
   MGP                      4.     CAI YR 2, NON YR 3           3.2000       3.2000        0.0           0.0       (     1)

A3                          4.     GRADE FOUR                 105.4000       8.1077        9.3117       86.7074    (    13)
   MGP                      1.     CAI YR 2, CAI YR 3          74.8000       9.3500       11.6073      134.7286    (     8)
   MGP                      2.     NON YR 2, NON YR 3          14.3000       4.7667        5.0649       25.6533    (     3)
   MGP                      4.     CAI YR 2, NON YR 3          16.3000       8.1500        0.4950        0.2450    (     2)

A3                          5.     GRADE FIVE                 121.2999      12.1300       12.9222      166.9823    (    10)
   MGP                      1.     CAI YR 2, CAI YR 3          73.5000      14.7000       14.4815      209.7140    (     5)
   MGP                      2.     NON YR 2, NON YR 3          39.1000      13.0333       13.4396      180.6234    (     3)
   MGP                      4.     CAI YR 2, NON YR 3           8.7000       4.3500       12.0915      146.2051    (     2)

A3                          6.     GRADE SIX                    4.3000       0.7167        5.8664       34.4376    (     6)
   MGP                      1.     CAI YR 2, CAI YR 3          -2.1000      -0.7000        3.7162       13.8100    (     3)
   MGP                      2.     NON YR 2, NON YR 3           5.2000       2.6000       11.4551      131.2200    (     2)
   MGP                      4.     CAI YR 2, NON YR 3           1.2000       1.2000        0.0           0.0       (     1)

A3                         10.     GRADE TEN                   18.8000       9.4000        8.7681       76.8831    (     2)
   MGP                      1.     CAI YR 2, CAI YR 3          18.8000       9.4000        8.7681       76.8831    (     2)

  TOTAL CASES =      163
MISSING CASES =      123 OR  75.5 PCT.
```

APPENDIX B

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TABLE B1

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation

READING NCE PRETEST YEAR 1

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   V31        READING PRETEST NCE SCORE 80
   BROKEN DOWN BY    V3         GRADE LEVEL 80
               BY    RGP        READING GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                   CODE    VALUE LABEL                  SUM         MEAN      STD DEV     VARIANCE          N

FOR ENTIRE POPULATION                                     21970.2966      30.9441     13.4090     179.8009     (  710)


V3                           2.    GRADE TWO               2421.5996      33.6333     14.8235     219.7352     (   72)
   RGP                       1.    CAI YR 1                 526.5999      40.5077     13.1874     173.9074     (   13)
   RGP                       2.    NON-CAI YR 1            1894.9997      32.1186     14.8351     220.0794     (   59)

V3                           3.    GRADE THREE             3201.8995      32.0190     10.3859     107.8662     (  100)
   RGP                       1.    CAI YR 1                2035.4997      33.9250     10.0824     101.6541     (   60)
   RGP                       2.    NON-CAI YR 1            1166.3998      29.1600     10.2984     106.0573     (   40)

V3                           4.    GRADE FOUR              3486.9994      33.2095     12.0276     144.6622     (  105)
   RGP                       1.    CAI YR 1                1768.0998      36.0837     13.1245     172.2522     (   49)
   RGP                       2.    NON-CAI YR 1            1718.8997      30.6946     10.4601     109.4147     (   56)

V3                           5.    GRADE FIVE              3256.1996      30.4318     12.3852     153.3935     (  107)
   RGP                       1.    CAI YR 1                1063.2998      32.2212     10.7339     115.2167     (   33)
   RGP                       2.    NON-CAI YR 1            2192.8997      29.6338     13.0436     170.1306     (   74)

V3                           6.    GRADE SIX               1671.2997      32.1404     12.3008     151.4585     (   52)
   RGP                       1.    CAI YR 1                1252.8997      32.9710     12.6987     161.2572     (   38)
   RGP                       2.    NON-CAI YR 1             418.3999      29.8857     11.3017     127.7290     (   14)

V3                           7.    GRADE SEVEN             1391.7998      30.9289     10.6615     113.6664     (   45)
   RGP                       1.    CAI YR 1                 354.4000      29.5333     13.5470     183.5224     (   12)
   RGP                       2.    NON-CAI YR 1            1037.3998      31.4364      9.6027      92.2124     (   33)

V3                           8.    GRADE EIGHT              930.8999      32.1000     13.3783     178.9800     (   29)
   RGP                       2.    NON-CAI YR 1             930.8999      32.1000     13.3783     178.9800     (   29)

V3                           9.    GRADE NINE              2792.7996      30.0301     15.0558     226.6777     (   93)
   RGP                       1.    CAI YR 1                1265.5998      26.9277     16.3515     267.3702     (   47)
   RGP                       2.    NON-CAI YR 1            1527.1998      33.2000     13.0305     169.7930     (   46)

V3                          10.    GRADE TEN               1527.0998      26.7912     17.2244     296.6797     (   57)
   RGP                       1.    CAI YR 1                1026.8999      30.2029     16.1367     260.3935     (   34)
   RGP                       2.    NON-CAI YR 1             500.1999      21.7478     17.8889     320.0135     (   23)

V3                          11.    GRADE ELEVEN             763.1999      25.4400     15.5027     240.3328     (   30)
   RGP                       1.    CAI YR 1                 558.8999      26.6143     15.2160     231.5273     (   21)
   RGP                       2.    NON-CAI YR 1             204.3000      22.7000     16.7428     280.3224     (    9)


V3                          12.    GRADE TWELVE             526.4999      26.3250     14.5209     210.8577     (   20)
   RGP                       1.    CAI YR 1                 190.0000      21.1111     15.4337     238.1985     (    9)
   RGP                       2.    NON-CAI YR 1             336.4999      30.5909     12.8681     165.5809     (   11)
```

TABLE B2

Descriptive Statistics for NCE Pretest, Post Test
and Gain Scores by Treatment and Grade Level for
Reading and Mathematics in Each Year of the
Program's Operation
READING NCE POST TEST YEAR 1

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   V33       READING POSTTEST NCE SCORE 80
    BROKEN DOWN BY   V3        GRADE LEVEL 80
                BY   RGP       READING GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                   CODE     VALUE LABEL                 SUM         MEAN       STD DEV      VARIANCE          N

FOR ENTIRE POPULATION                                        26009.3964     36.6330     14.7846     218.5848    (   710)


V3                           2.     GRADE TWO                 2912.0996     40.4458     15.9627     254.8073    (    72)
   RGP                       1.     CAI YR 1                   596.5999     45.8923     14.8771     221.3290    (    13)
   RGP                       2.     NON-CAI YR 1              2315.4997     39.2458     16.0028     256.0132    (    59)

V3                           3.     GRADE THREE               4134.0995     41.3410     12.2113     149.1100    (   100)
   RGP                       1.     CAI YR 1                  2500.1997     41.6700     12.4938     156.0944    (    60)
   RGP                       2.     NON-CAI YR 1              1633.8998     40.8475     11.9150     141.9677    (    40)

V3                           4.     GRADE FOUR                3897.6994     37.1209     11.2052     125.5570    (   105)
   RGP                       1.     CAI YR 1                  1980.4997     40.4184     10.5880     112.1081    (    49)
   RGP                       2.     NON-CAI YR 1              1917.1997     34.2357     11.0189     121.4172    (    56)

V3                           5.     GRADE FIVE                3781.2994     35.3392     11.9170     142.0143    (   107)
   RGP                       1.     CAI YR 1                  1206.8998     36.5727      9.2809      86.1350    (    33)
   RGP                       2.     NON-CAI YR 1              2574.3996     34.7892     12.9406     167.4558    (    74)

V3                           6.     GRADE SIX                 2175.4998     41.8365     10.4735     109.6945    (    52)
   RGP                       1.     CAI YR 1                  1605.8998     42.2605     10.5406     111.0922    (    38)
   RGP                       2.     NON-CAI YR 1              ,569.5999     40.6857     10.5926     112.2028    (    14)

V3                           7.     GRADE SEVEN               1338.1998     29.7378     11.0230     121.5069    (    45)
   RGP                       1.     CAI YR 1                   380.4999     31.7083      8.1104      65.7770    (    12)
   RGP                       2.     NON-CAI YR 1               957.6998     29.0212     11.9303     142.4748    (    33)

V3                           8.     GRADE EIGHT               1064.5998     36.7103     16.4282     269.8859    (    29)
   RGP                       2.     NON-CAI YR 1              1064.5998     36.7103     16.4282     269.8859    (    29)

V3                           9.     GRADE NINE                3305.6996     35.5452     19.5023     380.3392    (    93)
   RGP                       1.     CAI YR 1                  1358.2998     28.9000     21.6647     469.3582    (    47)
   RGP                       2.     NON-CAI YR 1              1947.3998     42.3348     14.3021     204.5455    (    46)

V3                          10.     GRADE TEN                 1864.8997     32.7175     15.8784     252.1250    (    57)
   RGP                       1.     CAI YR 1                  1257.4998     36.9853     12.0493     145.1801    (    34)
   RGP                       2.     NON-CAI YR 1               607.3999     26.4087     18.8211     354.2344    (    23)

V3                          11.     GRADE ELEVEN               906.0999     30.2033     19.1604     367.1224    (    30)
   RGP                       1.     CAI YR 1                   608.3999     28.9714     19.9064     396.2801    (    21)
   RGP                       2.     NON-CAI YR 1               297.7000     33.0778     18.0797     326.8745    (     9)

                            12.     GRADE TWELVE               629.1999     31.4600     17.7448     314.8772    (    20)
V3                           1.     CAI YR 1                   236.7000     26.3000     21.3155     454.3500    (     9)
   RGP                       2.     NON-CAI YR 1               392.4999     35.6818     13.8281     191.2176    (    11)
   RGP
```

TABLE B5
Descriptive Statistics for NCE Pretest, Post Test
and Gain Scores by Treatment and Grade Level for
Reading and Mathematics in Each Year of the
Program's Operation
READING NCE GAIN YEAR 1

```
--------------------  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  --------------------
CRITERION VARIABLE   RGAIN      READING NCE GAIN
    BROKEN DOWN BY   V3         GRADE LEVEL 80
                BY   RGP        READING GROUP
-------------------------------------------------------------------------------------------------------

VARIABLE                  CODE     VALUE LABEL                SUM          MEAN       STD DEV      VARIANCE        N

FOR ENTIRE POPULATION                                     4039.0996       5.6889      12.5340      157.1016   (   710)


V3                          2.     GRADE TWO              490.5000       6.8125      15.0539      226.6213   (    72)
   RGP                      1.     CAI YR 1                70.0000       5.3846       7.8943       62.3196   (    13)
   RGP                      2.     NON-CAI YR 1           420.5000       7.1271      16.2470      263.9643   (    59)

V3                          3.     GRADE THREE            932.2000       9.3220      12.3531      152.5994   (   100)
   RGP                      1.     CAI YR 1               464.6999       7.7450      11.9951      143.8835   (    60)
   RGP                      2.     NON-CAI YR 1           467.5000      11.6875      12.6544      160.1339   (    40)

V3                          4.     GRADE FOUR             410.7000       3.9114      11.5659      133.7694   (   105)
   RGP                      1.     CAI YR 1               212.3999       4.3347      13.2002      174.2452   (    49)
   RGP                      2.     NON-CAI YR 1           198.3001       3.5411      10.0288      100.5761   (    56)

V3                          5.     GRADE FIVE             525.0998       4.9075      12.1192      146.8750   (   107)
   RGP                      1.     CAI YR 1               143.6000       4.3515      11.9526      142.8644   (    33)
   RGP                      2.     NON-CAI YR 1           381.4999       5.1554      12.2655      150.4436   (    74)

V3                          6.     GRADE SIX              504.2001       9.6962      11.1369      124.0313   (    52)
   RGP                      1.     CAI YR 1               353.0000       9.2895      12.4904      156.0106   (    38)
   RGP                      2.     NON-CAI YR 1           151.2000      10.8000       6.3842       40.7585   (    14)

V3                          7.     GRADE SEVEN            -53.6000      -1.1911      12.2244      149.4356   (    45)
   RGP                      1.     CAI YR 1                26.1000       2.1750      12.2076      149.0256   (    12)
   RGP                      2.     NON-CAI YR 1           -79.6999      -2.4151      12.1841      148.4525   (    33)

V3                          8.     GRADE EIGHT            133.6999       4.6103       9.6799       93.7002   (    29)
   RGP                      2.     NON-CAI YR 1           133.6999       4.6103       9.6799       93.7002   (    29)

V3                          9.     GRADE NINE             512.9000       5.5151      12.5000      156.2512   (    93)
   RGP                      1.     CAI YR 1                92.7000       1.9723      13.4773      181.6366   (    47)
   RGP                      2.     NON-CAI YR 1           420.2000       9.1348      10.3572      107.2716   (    46)

V3                         10.     GRADE TEN              337.7999       5.9263      12.1159      146.7956   (    57)
   RGP                      1.     CAI YR 1               230.6000       6.7824      10.1747      103.5244   (    34)
   RGP                      2.     NON-CAI YR 1           107.2000       4.6609      14.6823      215.5686   (    23)

V3                         11.     GRADE ELEVEN           142.9003       4.7633      13.7129      188.0437   (    30)
   RGP                      1.     CAI YR 1                49.5000       2.3571      12.3068      151.4565   (    21)
   RGP                      2.     NON-CAI YR 1            93.4000      10.3778      15.8857      252.3556   (     9)

V3                         12.     GRADE TWELVE           102.7000       5.1350      10.9761      120.4748   (    20)
   RGP                      1.     CAI YR 1                46.7000       5.1889      11.6582      135.9137   (     9)
   RGP                      2.     NON-CAI YR 1            56.0000       5.0909      10.9620      120.1648   (    11)
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TABLE B4

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation

MATHEMATICS NCE PRETEST YEAR 1

```
- - - - - - - - - - - - - - - -   D E S C R I P T I O N   O F   S U B P O P U L A T I O N S   - - - - - - - - - - - - - - - - -
CRITERION VARIABLE    V35        MATH PRETEST NCE SCORE 80
    BROKEN DOWN BY    V3         GRADE LEVEL 80
                BY    MGP        MATH GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                      CODE     VALUE LABEL                   SUM           MEAN          STD DEV        VARIANCE          N

FOR ENTIRE POPULATION                                           17806.8972        35.3311        13.3926        179.3619    (    504)


V3                              1.     GRADE ONE                 2050.0497        33.0661        17.8006        316.8616    (     62)
   MGP                          1.     CAI YR 1                   874.8999        38.0391        20.2988        412.0406    (     23)
   MGP                          2.     NON-CAI YR 1              1175.1998        30.1333        15.6940        246.3002    (     39)

V3                              2.     GRADE TWO                 1467.4998        30.5729        13.9845        195.5675    (     48)
   MGP                          1.     CAI YR 1                   718.3999        29.9333        13.6766        187.0519    (     24)
   MGP                          2.     NON-CAI YR 1               749.0999        31.2125        14.5304        211.1324    (     24)

V3                              3.     GRADE THREE               2748.3995        33.1132        12.6319        159.5655    (     83)
   MGP                          1.     CAI YR 1                  1542.0997        34.2689        11.6461        135.6322    (     45)
   MGP                          2.     NON-CAI YR 1              1206.2998        31.7447        13.7401        188.7917    (     38)

V3                              4.     GRADE FOUR                1919.0998        39.9812        10.1421        102.8626    (     48)
   MGP                          1.     CAI YR 1                   853.8999        40.6619         7.4920         56.1295    (     21)
   MGP                          2.     NON-CAI YR 1              1065.1999        39.4518        11.9267        142.2426    (     27)

V3                              5.     GRADE FIVE                2247.7997        38.0983        12.1969        148.7653    (     59)
   MGP                          1.     CAI YR 1                  1535.9998        37.4634        11.7350        137.7094    (     41)
   MGP                          2.     NON-CAI YR 1               711.7999        39.5444        13.4292        180.3436    (     18)

V3                              6.     GRADE SIX                 2303.3996        37.1516         9.6298         92.7330    (     62)
   MGP                          1.     CAI YR 1                   382.5999        34.7818         8.6175         74.2616    (     11)
   MGP                          2.     NON-CAI YR 1              1920.7996        37.6627         9.8377         96.7806    (     51)

V3                              7.     GRADE SEVEN               1654.0997        33.7571        14.4138        207.7582    (     49)
   MGP                          2.     NON-CAI YR 1              1654.0997        33.7571        14.4138        207.7582    (     49)

V3                              8.     GRADE EIGHT                815.4999        35.4565        14.9481        223.4471    (     23)
   MGP                          2.     NON-CAI YR 1               815.4999        35.4565        14.9481        223.4471    (     23)

V3                              9.     GRADE NINE                1507.8998        35.9024        13.2657        176.0173    (     42)
   MGP                          1.     CAI YR 1                   842.2999        33.6920        14.0725        198.0341    (     25)
   MGP                          2.     NON-CAI YR 1               665.5999        39.1529        11.6906        136.6761    (     17)

V3                             10.     GRADE TEN                  708.9999        41.7059        10.6295        112.9856    (     17)
   MGP                          1.     CAI YR 1                   708.9999        41.7059        10.6295        112.9856    (     17)

V3                             11.     GRADE ELEVEN               384.0999        34.9182        11.0504        122.1116    (     11)
   MGP                          1.     CAI YR 1                   384.0999        34.9182        11.0504        122.1116    (     11)
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TABLE B5
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation
MATHEMATICS NCE POST TEST YEAR 1

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- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - -
CRITERION VARIABLE   V37        MATH POSTTEST NCE SCORE 80
   BROKEN DOWN BY    V3         GRADE LEVEL 80
               BY    MGP        MATH GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                 CODE      VALUE LABEL                  SUM          MEAN        STD DEV      VARIANCE        N

FOR ENTIRE POPULATION                                       23498.8969     46.6248      14.3209      205.0869   (   504)

V3                         1.      GRADE ONE                 3443.0997     55.5339      16.8182      282.8504   (    62)
   MGP                     1.      CAI YR 1                  1401.4999     60.9348      15.4118      237.5223   (    23)
   MGP                     2.      NON-CAI YR 1              2041.5999     52.3487      16.7544      280.7068   (    39)

V3                         2.      GRADE TWO                 2531.5998     52.7500      14.1367      199.8400   (    48)
   MGP                     1.      CAI YR 1                  1250.0999     52.0875      14.1134      199.1981   (    24)
   MGP                     2.      NON-CAI YR 1              1281.8999     53.4125      14.4318      208.2765   (    24)

V3                         3.      GRADE THREE               4008.1994     48.2916      15.0073      225.2191   (    83)
   MGP                     1.      CAI YR 1                  2245.0997     49.8911      15.3619      235.9872   (    45)
   MGP                     2.      NON-CAI YR 1              1763.0997     46.3974      14.5501      211.7040   (    38)

V3                         4.      GRADE FOUR                2164.0997     45.0854      12.0215      144.5119   (    48)
   MGP                     1.      CAI YR 1                  1017.9999     48.4762      10.3393      106.9015   (    21)
   MGP                     2.      NON-CAI YR 1              1146.0999     42.4481      12.7412      162.3418   (    27)

V3                         5.      GRADE FIVE                2778.9996     47.1017       9.2387       85.3530   (    59)
   MGP                     1.      CAI YR 1                  1935.1997     47.2000       9.7981       96.0020   (    41)
   MGP                     2.      NON-CAI YR 1               843.7999     46.8778       8.0772       65.2407   (    18)

V3                         6.      GRADE SIX                 2819.9996     45.4839      10.9598      120.1166   (    62)
   MGP                     1.      CAI YR 1                   520.4999     47.3182      11.8947      141.4836   (    11)
   MGP                     2.      NON-CAI YR 1              2299.4996     45.0882      10.8328      117.3456   (    51)

V3                         7.      GRADE SEVEN               1906.5997     38.9102      13.7506      189.0797   (    49)
   MGP                     2.      NON-CAI YR 1              1906.5997     38.9102      13.7506      189.0797   (    49)

V3                         8.      GRADE EIGHT                854.5998     37.1565      12.8747      165.7580   (    23)
   MGP                     2.      NON-CAI YR 1               854.5998     37.1565      12.8747      165.7580   (    23)

V3                         9.      GRADE NINE                1667.4998     39.7024      14.8437      220.3348   (    42)
   MGP                     1.      CAI YR 1                  1052.9999     42.1200      14.3465      205.8217   (    25)
   MGP                     2.      NON-CAI YR 1               614.4999     36.1471      15.2747      233.3176   (    17)

V3                        10.      GRADE TEN                  853.0999     50.1823      11.0987      123.1802   (    17)
   MGP                     1.      CAI YR 1                   853.0999     50.1823      11.0987      123.1802   (    17)

V3                        11.      GRADE ELEVEN               470.6999     42.7909       8.4810       71.9269   (    11)
   MGP                     1.      CAI YR 1                   470.6999     42.7909       8.4810       71.9269   (    11)
```

TABLE B6

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation

MATHEMATICS NCE GAIN YEAR 1

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   MGAIN       MATH NCE GAIN
    BROKEN DOWN BY   V3          GRADE LEVEL 80
                BY   MGP         MATH GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                   CODE     VALUE LABEL                SUM          MEAN         STD DEV        VARIANCE          N

FOR ENTIRE POPULATION                                     5691.5996       11.2937        14.5658        212.1455    (   504)


V3                           1.     GRADE ONE             1393.0000       22.4677        16.0322        257.0316    (    62)
  MGP                        1.     CAI YR 1               526.2000       22.8957        18.6292        347.0470    (    23)
  MGP                        2.     NON-CAI YR 1           866.4000       22.2154        14.5432        211.5059    (    39)

V3                           2.     GRADE TWO             1064.4999       22.1771        14.4069        207.5661    (    48)
  MGP                        1.     CAI YR 1               531.6999       22.1542        13.8793        192.6350    (    24)
  MGP                        2.     NON-CAI YR 1           532.8000       22.2000        15.2154        231.5078    (    24)

V3                           3.     GRADE THREE           1259.7999       15.1783        11.9807        143.5371    (    83)
  MGP                        1.     CAI YR 1               703.0000       15.6222        13.4497        180.8941    (    45)
  MGP                        2.     NON-CAI YR 1           556.7999       14.6526        10.1227        102.4695    (    38)

V3                           4.     GRADE FOUR             244.9999        5.1042        11.0774        122.7093    (    48)
  MGP                        1.     CAI YR 1               164.1000        7.8143        11.2635        126.8673    (    21)
  MGP                        2.     NON-CAI YR 1            80.9000        2.9963        10.6623        113.6842    (    27)

V3                           5.     GRADE FIVE             531.1999        9.0034        12.9511        167.7300    (    59)
  MGP                        1.     CAI YR 1               399.1999        9.7366        14.0161        196.4519    (    41)
  MGP                        2.     NON-CAI YR 1           132.0000        7.3333        10.2843        105.7656    (    18)

V3                           6.     GRADE SIX              516.2000        8.3323        13.0766        170.9964    (    62)
  MGP                        1.     CAI YR 1               137.9000       12.5364        13.3079        177.1006    (    11)
  MGP                        2.     NON-CAI YR 1           378.7000        7.4255        12.9725        168.2855    (    51)

V3                           7.     GRADE SEVEN            252.4999        5.1531        14.4919        210.0154    (    49)
  MGP                        2.     NON-CAI YR 1           252.4999        5.1531        14.4919        210.0154    (    49)

V3                           8.     GRADE EIGHT             39.1000        1.7000        11.8336        140.0345    (    23)
  MGP                        2.     NON-CAI YR 1            39.1000        1.7000        11.8336        140.0345    (    23)

V3                           9.     GRADE NINE             159.6000        3.8000        10.9051        118.9215    (    42)
  MGP                        1.     CAI YR 1               210.7000        8.4280         7.9545         63.2730    (    25)
  MGP                        2.     NON-CAI YR 1           -51.1000       -3.0059        11.2759        127.1455    (    17)

V3                          10.     GRADE TEN              144.1000        8.4765         7.3586         54.1494    (    17)
  MGP                        1.     CAI YR 1               144.1000        8.4765         7.3586         54.1494    (    17)

V3                          11.     GRADE ELEVEN            86.6000        7.8727        10.1365        102.7482    (    11)
  MGP                        1.     CAI YR 1                86.6000        7.8727        10.1365        102.7482    (    11)
```

TABLE B7
Descriptive Statistics for NCE Pretest, Post Test
and Gain Scores by Treatment and Grade Level for
Reading and Mathematics in Each Year of the
Program's Operation
READING NCE PRETEST YEAR 2

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - -
CRITERION VARIABLE   W31        READING PRETEST NCE SCORE 81
   BROKEN DOWN BY    W3         GRADE LEVEL 81
              BY     RGP        READING GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                   CODE     VALUE LABEL                SUM          MEAN        STD DEV      VARIANCE        N

FOR ENTIRE POPULATION                                      22867.9905      36.9435      12.9157      166.8165   (   619)

W3                          2.      GRADE TWO               4600.0994      38.3342      13.7090      187.9460   (   120)
   RGP                      1.      CAI YR 2                1873.4997      37.4700      14.6534      214.7229   (    50)
   RGP                      2.      NON-CAI YR 2            2726.5997      38.9514      13.1649      173.3147   (    70)

W3                          3.      GRADE THREE             3618.5995      38.4957      11.5946      134.4393   (    94)
   RGP                      1.      CAI YR 2                1427.4998      37.5658      10.2663      105.3974   (    38)
   RGP                      2.      NON-CAI YR 2            2191.0997      39.1268      12.4667      155.4186   (    56)

W3                          4.      GRADE FOUR              3172.5995      36.4667      10.2339      104.7334   (    87)
   RGP                      1.      CAI YR 2                1539.4997      34.9886      11.7427      137.8917   (    44)
   RGP                      2.      NON-CAI YR 2            1633.0998      37.9791       8.2055       67.3305   (    43)

W3                          5.      GRADE FIVE              3292.0995      37.4102      12.3620      152.8135   (    88)
   RGP                      1.      CAI YR 2                1132.4998      35.3906      13.2926      176.6933   (    32)
   RGP                      2.      NON-CAI YR 2            2159.5997      38.5643      11.7979      139.1914   (    56)

W3                          6.      GRADE SIX               1598.0997      31.9620      12.7007      161.3069   (    50)
   RGP                      1.      CAI YR 2                1349.4998      31.3837      12.8123      164.1471   (    43)
   RGP                      2.      NON-CAI YR 2             248.6000      35.5143      12.2960      151.1915   (     7)

W3                          7.      GRADE SEVEN             1972.1997      35.8582      10.8451      117.6162   (    55)
   RGP                      1.      CAI YR 2                1626.0998      35.3500      10.7968      116.5701   (    46)
   RGP                      2.      NON-CAI YR 2             346.0999      38.4555      11.3634      129.1278   (     9)

W3                          8.      GRADE EIGHT             1142.3998      40.8000      12.7653      162.9533   (    28)
   RGP                      1.      CAI YR 2                 314.3000      39.2875      10.1375      102.7698   (     8)
   RGP                      2.      NON-CAI YR 2             828.0999      41.4050      13.8692      192.3541   (    20)

W3                          9.      GRADE NINE              1552.1998      40.8474      15.2888      233.7739   (    38)
   RGP                      1.      CAI YR 2                1075.3999      43.0160      13.1989      174.2122   (    25)
   RGP                      2.      NON-CAI YR 2             476.7999      36.6769      18.4819      341.5802   (    13)

W3                         10.      GRADE TEN               1417.7997      32.2227      17.0624      291.1240   (    44)
   RGP                      1.      CAI YR 2                 406.7999      31.2923      18.6301      347.0806   (    13)
   RGP                      2.      NON-CAI YR 2            1010.9998      32.6129      16.6707      277.9131   (    31)

W3                         11.      GRADE ELEVEN             501.8999      33.4600      11.7775      138.7097   (    15)
   RGP                      2.      NON-CAI YR 2             501.8999      33.4600      11.7775      138.7097   (    15)
```

TABLE B3

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation

READING NCE POST TEST YEAR 2

```
------------------- D E S C R I P T I O N   O F   S U B P O P U L A T I O N S -------------------
CRITERION VARIABLE   W33       READING POSTTEST NCE SCORE 81
    BROKEN DOWN BY   W3        GRADE LEVEL 81
                BY   RGP       READING GROUP
-------------------------------------------------------------------------------------------------

VARIABLE                CODE   VALUE LABEL              SUM        MEAN      STD DEV    VARIANCE       N

FOR ENTIRE POPULATION                               25440.9964    41.1002    14.5633    212.0885   (  619)


W3                       2.    GRADE TWO             5249.4993    43.7458    16.0527    265.3031   (  120)
   RGP                   1.    CAI YR 2              2386.9997    47.7400    16.3880    268.5661   (   50)
   RGP                   2.    NON-CAI YR 2          2862.4996    40.8929    16.7808    281.5952   (   70)

W3                       3.    GRADE THREE           3954.6994    42.0713    13.2947    176.7492   (   94)
   RGP                   1.    CAI YR 2              1610.6998    42.3868    12.5089    156.4714   (   38)
   RGP                   2.    NON-CAI YR 2          2343.9997    41.8571    13.9100    193.4887   (   56)

W3                       4.    GRADE FOUR            3281.4996    37.7184    11.0999    123.2075   (   87)
   RGP                   1.    CAI YR 2              1738.6998    39.5159    10.0878    101.7642   (   44)
   RGP                   2.    NON-CAI YR 2          1542.7996    35.8791    11.8847    141.2464   (   43)

W3                       5.    GRADE FIVE            3462.6995    39.3489    11.6763    136.3362   (   88)
   RGP                   1.    CAI YR 2              1349.7998    42.1812    11.4736    131.6429   (   32)
   RGP                   2.    NON-CAI YR 2          2112.8997    37.7304    11.5845    134.2000   (   56)

W3                       6.    GRADE SIX             2110.3997    42.2080    11.2675    126.9600   (   50)
   RGP                   1.    CAI YR 2              1832.4998    42.6163    11.3478    128.7733   (   43)
   RGP                   2.    NON-CAI YR 2           277.9000    39.7000    11.2069    125.5934   (    7)

W3                       7.    GRADE SEVEN           1957.8996    35.5982    12.6245    159.3761   (   55)
   RGP                   1.    CAI YR 2              1668.6997    36.2761    12.1532    147.7031   (   46)
   RGP                   2.    NON-CAI YR 2           289.2000    32.1333    15.1277    228.8474   (    9)

W3                       8.    GRADE EIGHT           1193.7998    42.6357    17.0729    291.4831   (   28)
   RGP                   1.    CAI YR 2               353.6000    44.2000    18.4073    338.8255   (    8)
   RGP                   2.    NON-CAI YR 2           840.1999    42.0100    16.9568    287.5389   (   20)

W3                       9.    GRADE NINE            1937.3997    50.9842    19.3929    376.0822   (   38)
   RGP                   1.    CAI YR 2              1398.6998    55.9480    18.9848    360.4234   (   25)
   RGP                   2.    NON-CAI YR 2           538.6999    41.4385    16.9913    288.7059   (   13)

W3                      10.    GRADE TEN             1734.6998    39.4250    15.8941    252.6214   (   44)
   RGP                   1.    CAI YR 2               486.0999    37.3923    14.9537    223.6141   (   13)
   RGP                   2.    NON-CAI YR 2          1248.5998    40.2774    16.4348    270.1630   (   31)

W3                      11.    GRADE ELEVEN           558.3999    37.2267    13.8646    192.2263   (   15)
   RGP                   2.    NON-CAI YR 2           558.3999    37.2267    13.8646    192.2263   (   15)
```

TABLE B9
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation
READING NCE GAIN YEAR 2

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE    RGAIN       READING NCE GAIN
   BROKEN DOWN BY     W3          GRADE LEVEL 81
               BY     RGP         READING GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE     VALUE LABEL                  SUM          MEAN        STD DEV      VARIANCE         N

FOR ENTIRE POPULATION                                        2572.9998       4.1567      13.2097      174.4966    (   619)


W3                         2.      GRADE TWO                  649.3999       5.4117      17.1162      292.9657    (   120)
  RGP                      1.      CAI YR 2                   513.5000      10.2700      18.8936      356.9658    (    50)
  RGP                      2.      NON-CAI YR 2               135.8999       1.9414      14.9144      222.4384    (    70)

W3                         3.      GRADE THREE                336.1000       3.5755      12.3848      153.3834    (    94)
  RGP                      1.      CAI YR 2                   183.2000       4.8211      11.0919      123.0298    (    38)
  RGP                      2.      NON-CAI YR 2               152.9000       2.7304      13.2209      174.7927    (    56)

W3                         4.      GRADE FOUR                 108.9001       1.2517      10.2110      104.2655    (    87)
  RGP                      1.      CAI YR 2                   199.2001       4.5273      10.9311      119.4895    (    44)
  RGP                      2.      NON-CAI YR 2               -90.2999      -2.1000       8.2716       68.4200    (    43)

W3                         5.      GRADE FIVE                 170.6000       1.9386      11.4663      131.4752    (    88)
  RGP                      1.      CAI YR 2                   217.2999       6.7906      12.9643      168.0737    (    32)
  RGP                      2.      NON-CAI YR 2               -46.7000      -0.8339       9.5767       91.7135    (    56)

W3                         6.      GRADE SIX                  512.3000      10.2460       9.8160       96.3554    (    50)
  RGP                      1.      CAI YR 2                   483.0000      11.2326       9.8308       96.6451    (    43)
  RGP                      2.      NON-CAI YR 2                29.3000       4.1857       7.7875       60.6447    (     7)

W3                         7.      GRADE SEVEN                -14.3001      -0.2600      10.9517      119.9391    (    55)
  RGP                      1.      CAI YR 2                    42.5999       0.9261      10.9427      119.7424    (    46)
  RGP                      2.      NON-CAI YR 2               -56.9000      -6.3222       9.3061       86.6043    (     9)

W3                         8.      GRADE EIGHT                 51.4000       1.8357       8.9153       79.4824    (    28)
  RGP                      1.      CAI YR 2                    39.3000       4.9125      12.2327      149.6383    (     8)
  RGP                      2.      NON-CAI YR 2                12.1000       0.6050       7.2276       52.2384    (    20)

W3                         9.      GRADE NINE                 385.2000      10.1368      17.5951      309.5361    (    38)
  RGP                      1.      CAI YR 2                   323.3000      12.9320      15.9304      253.7772    (    25)
  RGP                      2.      NON-CAI YR 2                61.9000       4.7615      19.9856      399.4242    (    13)

W3                        10.      GRADE TEN                  316.9000       7.2023      11.6478      135.6717    (    44)
  RGP                      1.      CAI YR 2                    79.3000       6.1000      11.5739      133.9545    (    13)
  RGP                      2.      NON-CAI YR 2               237.6000       7.6645      11.8378      140.1335    (    31)

W3                        11.      GRADE ELEVEN                56.5000       3.7667      10.1349      102.7153    (    15)
  RGP                      2.      NON-CAI YR 2                56.5000       3.7667      10.1349      102.7153    (    15)
```

TABLE B10
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation
MATHEMATICS NCE PRETEST YEAR 2

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   M35         MATH PRETEST NCE SCORE 81
    BROKEN DOWN BY   W3          GRADE LEVEL 81
                BY   MGP         MATH GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                     CODE    VALUE LABEL                 SUM           MEAN         STD DEV        VARIANCE          N

FOR ENTIRE POPULATION                                        14893.4980       42.1912       13.8677       192.3194     (    353)


W3                            1.     GRADE ONE                2191.5997       40.5852       17.0820       291.7441     (     54)
   MGP                        1.     CAI YR 2                  532.4999       35.5000       15.7016       246.5414     (     15)
   MGP                        2.     NON-CAI YR 2             1659.0998       42.5410       17.3785       302.0114     (     39)

W3                            2.     GRADE TWO                2878.4997       42.9627       14.7151       216.5336     (     67)
   MGP                        1.     CAI YR 2                 1003.3999       41.8083       13.4807       181.7265     (     24)
   MGP                        2.     NON-CAI YR 2             1875.0998       43.6070       15.4778       239.5621     (     43)

W3                            3.     GRADE THREE              2684.8996       44.0147       12.6417       159.8116     (     61)
   MGP                        1.     CAI YR 2                 1204.1998       46.3154       15.5951       243.2077     (     26)
   MGP                        2.     NON-CAI YR 2             1480.6997       42.3057        9.8049        96.1370     (     35)

W3                            4.     GRADE FOUR               3224.6995       41.8792       13.1532       173.0067     (     77)
   MGP                        1.     CAI YR 2                 1501.0998       40.5703       13.6094       185.2122     (     37)
   MGP                        2.     NON-CAI YR 2             1723.5998       43.0900       12.7350       162.1832     (     40)

W3                            5.     GRADE FIVE               3094.4996       41.8176       13.7624       189.4034     (     74)
   MGP                        1.     CAI YR 2                 1496.6998       42.7629       13.5076       182.4594     (     35)
   MGP                        2.     NON-CAI YR 2             1597.7998       40.9692       14.1081       199.0390     (     39)

W3                            6.     GRADE SIX                 819.2999       40.9650        7.0518        49.7277     (     20)
   MGP                        1.     CAI YR 2                  599.2999       42.8071        7.4232        55.1036     (     14)
   MGP                        2.     NON-CAI YR 2              220.0000       36.6667        3.7447        14.0226     (      6)

  TOTAL CASES =      436
MISSING CASES =       83 OR  19.0 PCT.
```

TABLE B11
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation
MATHEMATICS NCE POST TEST YEAR 2

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   M37        MATH POSTTEST NCE SCORE 81
    BROKEN DOWN BY   M3         GRADE LEVEL 81
                BY   MGP        MATH GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE     VALUE LABEL                  SUM          MEAN        STD DEV      VARIANCE           N

FOR ENTIRE POPULATION                                        17352.4980     49.1572      15.5355      241.3522   (   353)


M3                          1.     GRADE ONE                  2895.4997     53.6204      19.0728      367.0162   (    54)
   MGP                      1.     CAI YR 2                    854.4997     56.9667      21.8524      477.5261   (    15)
   MGP                      2.     NON-CAI YR 2               2040.9998     52.3333      18.9139      357.7375   (    39)

M3                          2.     GRADE TWO                  3623.1997     54.0776      17.5054      306.4375   (    67)
   MGP                      1.     CAI YR 2                   1381.0000     57.5417      16.0809      258.5941   (    24)
   MGP                      2.     NON-CAI YR 2               2242.1998     52.1442      18.1452      329.2492   (    43)

M3                          3.     GRADE THREE                3021.7996     49.5377      14.1627      200.5834   (    61)
   MGP                      1.     CAI YR 2                   1363.6998     52.4500      16.3974      268.8735   (    26)
   MGP                      2.     NON-CAI YR 2               1658.0998     47.3743      12.0402      144.9655   (    35)

M3                          4.     GRADE FOUR                 3582.7996     46.5299      13.4446      180.7576   (    77)
   MGP                      1.     CAI YR 2                   1668.3998     45.0919      13.0806      171.1013   (    37)
   MGP                      2.     NON-CAI YR 2               1914.3998     47.8600      13.8032      190.5296   (    40)

M3                          5.     GRADE FIVE                 3321.1995     44.8811      12.8343      164.7232   (    74)
   MGP                      1.     CAI YR 2                   1611.8998     46.0543      12.1232      146.9731   (    35)
   MGP                      2.     NON-CAI YR 2               1709.2997     43.8282      13.5103      182.5254   (    39)

M3                          6.     GRADE SIX                   907.9999     45.4000       9.0275       81.4958   (    20)
   MGP                      1.     CAI YR 2                    634.9999     45.3571       8.8577       78.4560   (    14)
   MGP                      2.     NON-CAI YR 2                273.0000     45.5000      10.2799      105.6760   (     6)

  TOTAL CASES =      436
MISSING CASES =       83 OR  19.0 PCT.
```

TABLE B12
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation
MATHEMATICS GAIN YEAR 2

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   MGAIN       MATH NCE GAIN
    BROKEN DOWN BY   G3          GRADE LEVEL 81
                BY   MGP         MATH GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                  CODE    VALUE LABEL                  SUM          MEAN        STD DEV       VARIANCE          N

FOR ENTIRE POPULATION                                     2458.9999        6.9660       15.4763       239.5176    (   353)


G3                          1.    GRADE ONE                703.8999       13.0352       19.9350       397.4042    (    54)
   MGP                      1.    CAI YR 2                 322.0000       21.4667       23.6657       560.0665    (    15)
   MGP                      2.    NON-CAI YR 2             381.9000        9.7923       17.5331       307.4111    (    39)

G3                          2.    GRADE TWO                744.7000       11.1149       19.9002       396.0177    (    67)
   MGP                      1.    CAI YR 2                 377.6001       15.7333       19.4450       378.1043    (    24)
   MGP                      2.    NON-CAI YR 2             367.1000        8.5372       19.9063       396.2624    (    43)

G3                          3.    GRADE THREE              336.9000        5.5230       13.1703       173.4574    (    61)
   MGP                      1.    CAI YR 2                 159.5000        6.1346       13.6717       186.9167    (    26)
   MGP                      2.    NON-CAI YR 2             177.4000        5.0686       12.9678       168.1540    (    35)

G3                          4.    GRADE FOUR               358.1000        4.6506       11.6175       134.9666    (    77)
   MGP                      1.    CAI YR 2                 167.3000        4.5216       11.7871       138.9351    (    37)
   MGP                      2.    NON-CAI YR 2             190.8000        4.7700       11.6074       134.7324    (    40)

G3                          5.    GRADE FIVE               226.6999        3.0635       12.0465       145.1177    (    74)
   MGP                      1.    CAI YR 2                 115.2000        3.2914       10.5431       111.1586    (    35)
   MGP                      2.    NON-CAI YR 2             111.4999        2.8590       13.3678       178.7319    (    39)

G3                          6.    GRADE SIX                 88.7000        4.4350        7.1746        51.4750    (    20)
   MGP                      1.    CAI YR 2                  35.7000        2.5500        5.3697        28.8400    (    14)
   MGP                      2.    NON-CAI YR 2              53.0000        8.8333        9.3226        86.9167    (     6)

  TOTAL CASES =      436
MISSING CASES =       83 OR  19.0 PCT.
```

TABLE B13

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation

READING NCE PRETEST YEAR 3

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   X31        READING PRETEST NCE SCORE 82
    BROKEN DOWN BY   X3         GRADE LEVEL 82
                BY   RGP        READING GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                     CODE     VALUE LABEL                    SUM          MEAN        STD DEV      VARIANCE          N

FOR ENTIRE POPULATION                                            11439.3582      37.1409      11.8319      139.9936     (  308)


X3                             2.     GRADE TWO                   2285.4597      38.0910      14.6403      214.3394     (   60)
   RGP                         1.     CAI YR 3                    1036.1599      39.8538      12.0253      144.6114     (   26)
   RGP                         2.     NON-CAI YR 3                1249.2998      36.7441      16.4370      269.1090     (   34)

X3                             3.     GRADE THREE                 2170.6997      37.4259      11.1970      125.3728     (   58)
   RGP                         1.     CAI YR 3                    1334.2998      38.1229      10.9542      120.0539     (   35)
   RGP                         2.     NON-CAI YR 3                 836.3999      36.3652      11.6797      136.4106     (   23)

X3                             4.     GRADE FOUR                  2349.4996      36.7109       9.4934       90.1238     (   64)
   RGP                         1.     CAI YR 3                    1278.6998      38.7485       7.5324       56.7362     (   33)
   RGP                         2.     NON-CAI YR 3                1070.7998      34.5419      10.9112      119.0551     (   31)

X3                             5.     GRADE FIVE                  2614.8995      36.3180      12.4385      154.7116     (   72)
   RGP                         1.     CAI YR 3                    1484.9997      37.1250       9.7802       95.6522     (   40)
   RGP                         2.     NON-CAI YR 3                1129.8998      35.3094      15.1795      230.4176     (   32)

X3                             6.     GRADE SIX                   2018.7997      37.3852      11.0318      121.7013     (   54)
   RGP                         1.     CAI YR 3                    1343.7998      37.3278      12.1751      148.2340     (   36)
   RGP                         2.     NON-CAI YR 3                 674.9999      37.5000       8.6147       74.2130     (   18)

  TOTAL CASES =      319
MISSING CASES =       11 OR   3.4 PCT.
```

TABLE B14
Descriptive Statistics for NCE Pretest, Post Test
and Gain Scores by Treatment and Grade Level for
Reading and Mathematics in Each Year of the
Program's Operation
READING NCE POST TEST YEAR 3

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - -
CRITERION VARIABLE    X33        READING POSTTEST NCE SCORE 82
    BROKEN DOWN BY    X3         GRADE LEVEL 82
                BY    RGP        READING GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                   CODE      VALUE LABEL                     SUM          MEAN        STD DEV       VARIANCE        N

FOR ENTIRE POPULATION                                            13061.5982      42.4078      12.9838       168.5783   (   308)

X3                           2.      GRADE TWO                    2665.8996      44.4317      16.3954       268.8095   (    60)
   RGP                       1.      CAI YR 3                     1257.1998      48.3538      11.0349       121.7698   (    26)
   RGP                       2.      NON-CAI YR 3                 1408.6998      41.4323      19.1623       367.1925   (    34)

X3                           3.      GRADE THREE                  2513.7996      43.3414      13.4807       181.7281   (    58)
   RGP                       1.      CAI YR 3                     1593.8997      45.5400      15.1445       229.3558   (    35)
   RGP                       2.      NON-CAI YR 3                  919.8999      39.9956       9.8472        96.9677   (    23)

X3                           4.      GRADE FOUR                   2507.8996      39.1859      10.1791       103.6142   (    64)
   RGP                       1.      CAI YR 3                     1446.1998      43.8242       9.9721        99.4430   (    33)
   RGP                       2.      NON-CAI YR 3                 1061.6998      34.2484       7.9158        62.6592   (    31)

X3                           5.      GRADE FIVE                   2976.4996      41.3403      12.3872       153.4444   (    72)
   RGP                       1.      CAI YR 3                     1671.4998      41.7875      12.8260       164.5061   (    40)
   RGP                       2.      NON-CAI YR 3                 1304.9998      40.7812      11.7101       137.1274   (    32)

X3                           6.      GRADE SIX                    2397.4997      44.3981      11.5406       133.1851   (    54)
   RGP                       1.      CAI YR 3                     1640.3998      45.5667      12.6654       160.4149   (    36)
   RGP                       2.      NON-CAI YR 3                  757.0999      42.0611       8.6743        75.2437   (    18)

  TOTAL CASES =      319
MISSING CASES =       11 OR    3.4 PCT.
```

TABLE B15

Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation

READING NCE GAIN YEAR 3

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - -
CRITERION VARIABLE   RGAIN      READING NCE GAIN
   BROKEN DOWN BY    X3         GRADE LEVEL 82
              - BY   RGP        READING GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                       CODE     VALUE LABEL                  SUM          MEAN       STD DEV      VARIANCE          N

FOR ENTIRE POPULATION                                          1622.2000        5.2669       10.1616      103.2621    (   308)

X3                                2.    GRADE TWO               380.3999        6.3400       12.8795      165.8821    (    60)
   RGP                            1.    CAI YR 3                221.0000        8.5000       12.1776      148.2932    (    26)
   RGP                            2.    NON-CAI YR 3            159.4000        4.6882       13.3320      177.7422    (    34)

X3                                3.    GRADE THREE             343.0999        5.9155        9.6675       93.4616    (    58)
   RGP                            1.    CAI YR 3                259.6000        7.4171       10.2110      104.2644    (    35)
   RGP                            2.    NON-CAI YR 3             83.5000        3.6304        8.4833       71.9657    (    23)

X3                                4.    GRADE FOUR              158.4001        2.4750        9.3623       87.6536    (    64)
   RGP                            1.    CAI YR 3                167.5000        5.0758        8.3862       70.3281    (    33)
   RGP                            2.    NON-CAI YR 3             -9.1000       -0.2935        9.6756       93.6239    (    31)

X3                                5.    GRADE FIVE              361.6001        5.0222       10.3416      106.9473    (    72)
   RGP                            1.    CAI YR 3                186.5001        4.6625       10.6531      113.4895    (    40)
   RGP                            2.    NON-CAI YR 3            175.1000        5.4719       10.0894      101.7956    (    32)

X3                                6.    GRADE SIX               378.7000        7.0130        7.1511       51.1384    (    54)
   RGP                            1.    CAI YR 3                296.6000        8.2389        6.8058       46.3196    (    36)
   RGP                            2.    NON-CAI YR 3             82.1000        4.5611        7.3837       54.5146    (    18)

  TOTAL CASES =      319
MISSING CASES =       11 OR    3.4 PCT.
```

TABLE B16
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation
MATHEMATICS NCE PRETEST YEAR 3

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   X35        MATH PRETEST NCE SCORE 82
   BROKEN DOWN BY    X3         GRADE LEVEL 82
               BY    MGP        MATH GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                   CODE     VALUE LABEL                SUM           MEAN        STD DEV        VARIANCE          N

FOR ENTIRE POPULATION                                       6624.7998       38.5163      11.0??0        130.1086     (   172)

X3                          1.      GRADE ONE                662.7999       41.4250      15.7577        248.3359     (    16)
  MGP                       1.      CAI YR 3                 157.3000       39.3250       5.0599         25.6025     (     4)
  MGP                       2.      NON-CAI YR 3             505.4999       42.1250      18.1715        329.9783     (    12)

X3                          2.      GRADE TWO               1095.6999       37.7828      11.6446        143.2953     (    29)
  MGP                       1.      CAI YR 3                 470.8999       36.2231       6.6245         40.5736     (    13)
  MGP                       2.      NON-CAI YR 3             598.7999       37.4250      16.9773        286.3207     (    16)

X3                          3.      GRADE THREE             1041.2999       37.1893      11.1249        123.7625     (    28)
  MGP                       1.      CAI YR 3                 316.7000       39.5875      14.9037        224.5127     (     8)
  MGP                       2.      NON-CAI YR 3             724.5999       36.2300       9.4746         89.7675     (    20)

X3                          4.      GRADE FOUR              1366.6996       36.9919      10.1396        103.6285     (    37)
  MGP                       1.      CAI YR 3                 540.4999       36.0333      11.0100        121.2269     (    15)
  MGP                       2.      NON-CAI YR 3             826.1999       37.5454       9.8017         96.0748     (    22)

X3                          5.      GRADE FIVE              1577.8996       36.6953      11.0858        122.8947     (    43)
  MGP                       1.      CAI YR 3                 861.0999       35.8792      11.7290        137.5136     (    24)
  MGP                       2.      NON-CAI YR 3             716.7999       37.7263      10.4063        109.5432     (    19)

X3                          6.      GRADE SIX                878.3999       46.2316      10.0956        101.9212     (    19)
  MGP                       1.      CAI YR 3                 470.2999       47.0300       7.5598         57.1512     (    10)
  MGP                       2.      NON-CAI YR 3             408.0999       45.3444      12.7807        163.3453     (     9)

  TOTAL CASES =      181
MISSING CASES =        9 OR    5.0 PCT.
```

TABLE B17
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation
MATHEMATICS NCE POST TEST YEAR 3

```
- - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE   X37        MATH POSTTEST NCE SCORE #2
   BROKEN DOWN BY    X3         GRADE LEVEL #2
              BY     MGP        MATH GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                     CODE      VALUE LABEL                      SUM           MEAN        STD DEV       VARIANCE        N

FOR ENTIRE POPULATION                                                8505.7989       49.4523      13.3088       177.1234    (  172)

X3                             1.      GRADE ONE                      829.1999       51.8250      16.0016       256.0499    (   16)
  MGP                          1.      CAI YR 3                       192.1000       48.0250      17.8236       317.6324    (    4)
  MGP                          2.      NON-CAI YR 3                   637.0999       53.0917      15.9349       253.9171    (   12)

X3                             2.      GRADE TWO                     1660.2998       57.2517      17.8343       318.0983    (   29)
  MGP                          1.      CAI YR 3                       865.2999       66.5615      14.1857       201.2342    (   13)
  MGP                          2.      NON-CAI YR 3                   794.9999       49.6875      17.3183       299.9193    (   16)

X3                             3.      GRADE THREE                   1394.5998       49.8071      11.2190       126.1267    (   28)
  MGP                          1.      CAI YR 3                       386.0999       48.2625       9.5770        91.7199    (    8)
  MGP                          2.      NON-CAI YR 3                  1008.4999       50.4250      12.1189       146.8683    (   20)

X3                             4.      GRADE FOUR                    1622.8998       43.8622      10.3129       106.3552    (   37)
  MGP                          1.      CAI YR 3                       703.1999       46.8800       9.4037        88.4303    (   15)
  MGP                          2.      NON-CAI YR 3                   919.6999       41.8045      10.6033       112.4299    (   22)

X3                             5.      GRADE FIVE                    2057.4997       47.8488      10.9356       119.5921    (   43)
  MGP                          1.      CAI YR 3                      1146.7998       47.7833      11.1201       123.6536    (   24)
  MGP                          2.      NON-CAI YR 3                   910.6998       47.9316      10.9511       120.0034    (   19)

X3                             6.      GRADE SIX                      941.2999       49.5421      10.6876       114.2240    (   19)
  MGP                          1.      CAI YR 3                       512.5999       51.2600       9.1293        83.3449    (   10)
  MGP                          2.      NON-CAI YR 3                   428.6999       47.6333      12.4682       155.4556    (    9)

  TOTAL CASES =      181
MISSING CASES =        9 OR   5.0 PCT.
```

TABLE B13
Descriptive Statistics for NCE Pretest, Post Test and Gain Scores by Treatment and Grade Level for Reading and Mathematics in Each Year of the Program's Operation
MATHEMATICS NCE GAIN YEAR 3

```
- - - - - - - - - - - - - - - - - -  D E S C R I P T I O N   O F   S U B P O P U L A T I O N S  - - - - - - - - - - - - - - - - -
CRITERION VARIABLE    MGAIN       MATH NCE GAIN
    BROKEN DOWN BY    X3          GRADE LEVEL 82
                BY    MGP         MATH GROUP
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

VARIABLE                   CODE     VALUE LABEL                SUM          MEAN        STD DEV       VARIANCE         N

FOR ENTIRE POPULATION                                      1880.9999       10.9360      13.7471       188.9833    (   172)


X3                           1.     GRADE ONE               166.4001       10.4000      16.8521       283.9945    (    16)
  MGP                        1.     CAI YR 3                 34.8000        8.7000      18.8480       355.2465    (     4)
  MGP                        2.     NON-CAI YR 3            131.6000       10.9667      14.4561       208.9787    (    12)

X3                           2.     GRADE TWO               564.6000       19.4690      15.4757       239.4958    (    29)
  MGP                        1.     CAI YR 3                368.4000       28.3385      13.6102       185.2375    (    13)
  MGP                        2.     NON-CAI YR 3            196.2000       12.2625      13.2399       175.2944    (    16)

X3                           3.     GRADE THREE             353.3000       12.6179      15.6768       245.7615    (    28)
  MGP                        1.     CAI YR 3                 69.4000        8.6750      10.0869       101.7452    (     8)
  MGP                        2.     NON-CAI YR 3            283.9000       14.1950      17.3951       302.5910    (    20)

X3                           4.     GRADE FOUR              254.2000        6.8703      10.6730       113.9132    (    37)
  MGP                        1.     CAI YR 3                162.7000       10.8467      10.1400       102.8198    (    15)
  MGP                        2.     NON-CAI YR 3             91.5000        4.1591      10.3797       107.7387    (    22)

X3                           5.     GRADE FIVE              479.5999       11.1535      11.1930       125.2830    (    43)
  MGP                        1.     CAI YR 3                285.6999       11.9042      11.2270       126.0485    (    24)
  MGP                        2.     NON-CAI YR 3            193.9000       10.2053      11.3828       129.5672    (    19)

X3                           6.     GRADE SIX                62.9000        3.3105       8.9388        79.9021    (    19)
  MGP                        1.     CAI YR 3                 42.3000        4.2300       9.7599        95.2556    (    10)
  MGP                        2.     NON-CAI YR 3             20.6000        2.2889       8.3896        70.3861    (     9)

  TOTAL CASES =       181
MISSING CASES =         9 OR   5.0 PCT.
```